

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yurgelun-Todd et al. Confirmation No.: 5991
Serial No.: 10/556,134 Art Unit: 1651
Filed: February 12, 2007 Examiner: Aaron J. Kosar
Customer No.: 21559
Title: USE OF SECRETIN IN TREATMENTS OF DISORDERS
ASSOCIATED WITH THE AMYGDALA

DECLARATION OF DR. DEBORAH A. YURGELUN-TODD UNDER
37 C.F.R. § 1.132 TRAVERSING GROUNDS OF REJECTION

Under 37 C.F.R. § 1.132 and regarding the rejection of claims 1-7 under 35 U.S.C. § 112, first paragraph, for lack of enablement, I declare:

1. I am an inventor of the subject matter that is described and claimed in the above-captioned patent application. My curriculum vita is attached.
2. It is reasonable to conclude that secretin would be effective in treating a bipolar disorder. This opinion is based on my experimental observations that secretin modulates amygdalar activation in healthy patients, the knowledge that abnormal amygdalar function is implicated in bipolar disorder, and experimental observations of improvement in bipolar patients treated with secretin.
3. As described in the specification, we have performed experiments on functional magnetic resonance imaging (fMRI) of healthy control patients (page 12, line 12 – page 18, line 10). These fMRI experiments demonstrated that secretin alters amygdala responsiveness to affective stimuli. In addition, abnormalities of the amygdalar-frontal circuit have been implicated in a variety of behavioral and psychiatric disorders, including bipolar disorder (*see* page 1, line 14 – page 2, line 21).

4. In a double-blind crossover placebo-controlled study, we examined whether the administration of secretin results in mood stabilization. This study was conducted in eight male patients aged 18-40 years and meeting the diagnostic criteria for Bipolar I or II disorder (DSM-IV). The patients were in a mildly depressed phase of the illness during the study. Patients were allowed to continue their current treatment as usual pharmacotherapy. We administered clinical ratings, mood scales, and select neurocognitive measures designed to measure specific relevant domains both before and four hours following treatment with secretin or placebo. Although the investigation includes a double-blind placebo controlled visit, "placebo" in this case refers to the patient's standard pharmacotherapy with no secretin. Patients were administered a single dose of secretin equivalent to 1.0 µg/kg intravenously. This treatment is generally described in the specification at pages 6-10. Vital signs were monitored following drug administration. As this was a double-blind study, the drug/placebo bags were randomized. Various clinical rating scales were administered to the patients, which included the Young Mania Rating Scale (YMRS), the Montgomery-Asberg Depression Rating Scale (MADRS), the Hamilton Depression Scale (HAM-D) scores, the Barratt Impulsivity Scale (BIS), the Profile of Mood States (POMS), the State-Trait Inventory (STAI), the Clinical Global Impression for Bipolar Patients (CGI-BP), and the Positive and Negative Affect Scale (PANAS). All patients were scanned using fMRI both before and after administration of the placebo or secretin. Baseline scanning included structural MRI and fMRI scanning on a 3T magnet. Following the first scanning session, patients were administered either placebo (saline) or a single infusion of secretin via an infusion. One hour after drug administration, patients underwent the second fMRI scanning protocol and were then re-assessed on the clinical rating scales. Within two weeks, patients repeated these procedures for study visit two and were administered either saline or secretin, whichever they did not receive in study visit one. During the fMRI part of the protocol, patients completed two challenge paradigms that included the presentation of happy, sad, fearful, and neutral faces, as well as more cognitively based tasks requiring the inhibition of overlearned responses, such as the Stroop test.

5. As shown in Figures 1 and 2 in the Appendix, patients were administered the Positive and Negative Affect Scale test. Negative symptoms were reduced after both placebo and secretin injection, where responses to the negative affect subscale after secretin injections suggested a trend toward significant improvement ($p = 0.064$) (Figure 1 in Appendix). Responses to the positive affect subscale were essentially unchanged for the placebo injection but did appear reduced following secretin injection (Figure 1 in Appendix). Individual responses to the negative symptom portion showed that administration of a single dose of secretin produced some reduction of negative symptoms in four out of the six patients with bipolar disorder (Figure 2 in Appendix). It is not surprising that a subset of patients reported an observable clinical effect, as most treatment interventions have shown effects only on limited patient subgroups.

7. As shown in Figure 3 in the Appendix, patients were administered the Stroop Color Word Task test, which measures cognitive inhibition. The patients receiving secretin demonstrated improved performance on all three conditions of color naming, word reading, and interference following the secretin injection relative to baseline. However, only performance on the word reading condition reached statistical significance ($p = 0.025$) (Figure 3 in Appendix). In contrast, following the placebo injection, no differences in performance were detected for any condition relative to baseline.

8. As shown in Figures 4 and 5 in the Appendix, patients were scanned using fMRI. These fMRI findings showed that secretin alters brain activation in multiple brain regions (Figure 4 in Appendix). In particular, administration of secretin increased amygdalar activation in bipolar patients, compared to administration of placebo (Figure 5 in Appendix). Along with the other structures identified, including the superior temporal gyrus and the cingulate gyrus, the amygdala is considered a key structure in emotional processing, and these findings suggest that secretin aids in the normalization of amygdalar response to emotional stimuli in a variety of conditions, in this case, bipolar disorder.

9. I have also reviewed the press release from the Repligen Corporation ("Repligen Licenses Patent Rights for Treatment of Bipolar Disorder," Mar. 31, 2009). This press release relates to a license agreement for intellectual property owned by The McLean Hospital Corporation, the assignee of this application. The press release states that "current therapies [for bipolar disorder] are ineffective and result in numerous side effects" and further explains that while "several therapies are approved for the treatment of bipolar disorder, many individuals are unable to tolerate treatment-related side effects." The press release indicates that treatments are available for bipolar disorder. The press release also corroborates our observation (as discussed above) that not all therapies work in all patients and that most therapies are only effective on limited patient subgroups. The press release does not call into question the effectiveness of secretin in treating bipolar disorder.

10. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

March 3, 2009
Date

Dr. Deborah A. Yurgelun-Todd
Dr. Deborah A. Yurgelun-Todd

APPENDIX

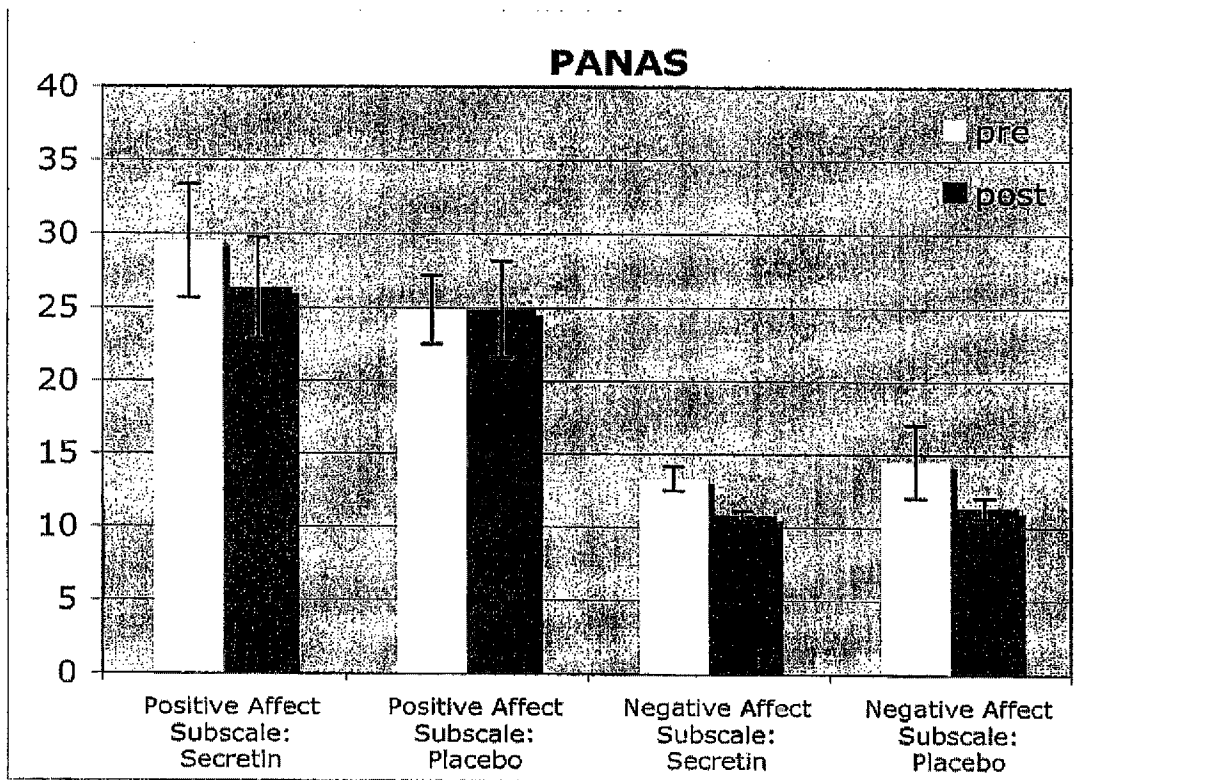


Figure 1. Scores on the Positive and Negative Affect Scale (PANAS) measured pre-administration (white) and post-administration (gray) with either secretin or placebo.

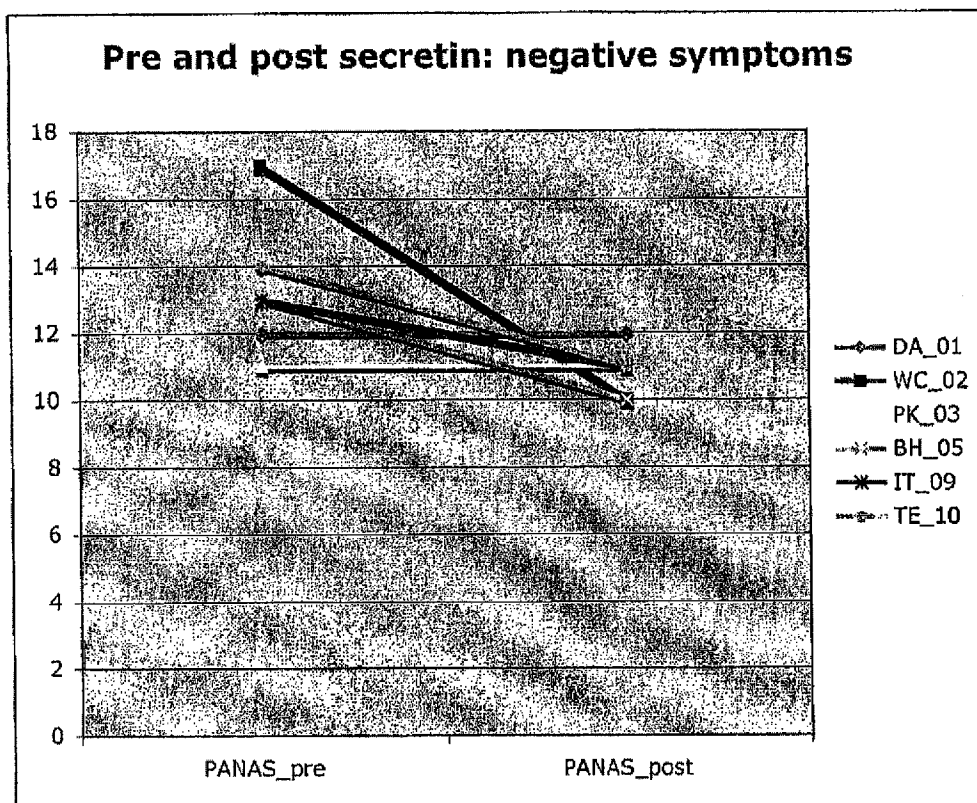


Figure 2. Individual responses to negative symptoms portion of the Positive and Negative Affect Scale (PANAS) measured pre-administration (labeled "PANAS_pre") and post-administration (labeled "PANAS_post") with secretin.

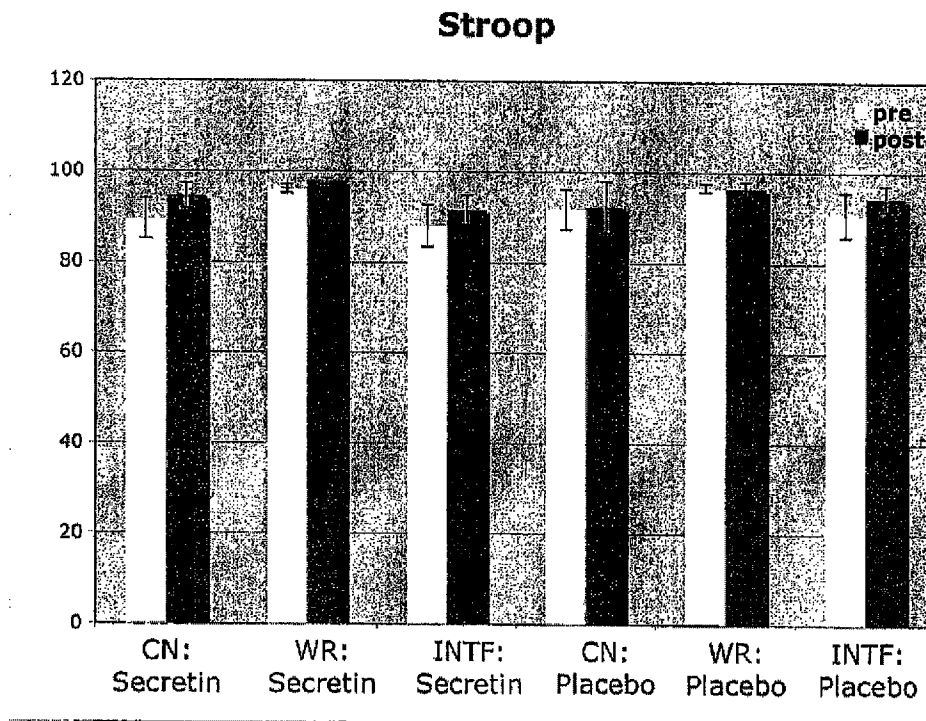


Figure 3. Performance on Stroop Color Word Task on conditions of color naming (labeled "CN"), word reading (labeled "WR"), and interference (labeled "INTF") relative to baseline, which were measured pre-administration (white) and post-administration (gray) with secretin or placebo.

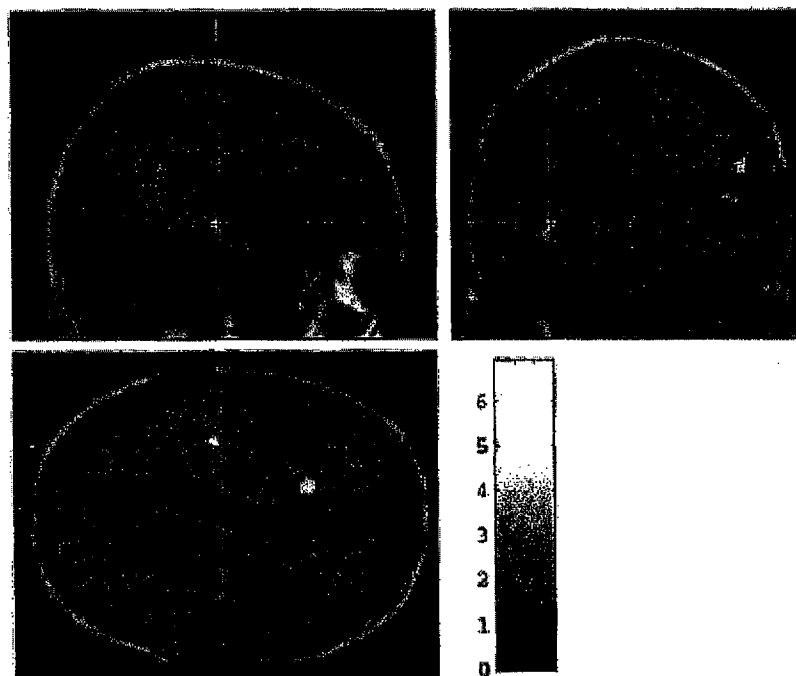


Figure 4. Whole brain SPM results for adult bipolar patients in response to fearful facial affect. Intravenous secretin administration produced higher activation in perception of fearful affect in multiple brain regions, including the left superior temporal gyrus, bilateral postcentral gyrus, and the right caudate, relative to placebo.

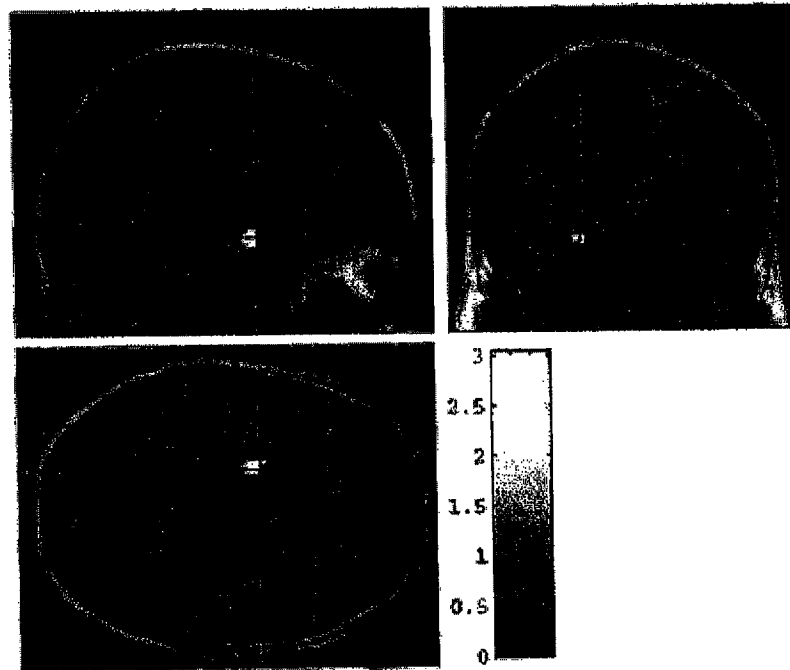


Figure 5. SPM results for amygdala activation in adult bipolar patients in response to fearful facial affect. Intravenous secretin administration produced higher activation in perception of fearful affect in the left amygdala relative to placebo.

CURRICULUM VITAE

PART I: General Information

Date Prepared: September 1, 2009

Name: Deborah Yurgelun-Todd

Office Address: **The Brain Institute** **George E. Wahlen VAMC**
 University of Utah School of Medicine **500 Foothill Drive**
 383 Colorow Drive **Salt Lake City, UT 84108**
 Salt Lake City, Utah 84108

E-Mail: deborah.yurgelun-todd@hsc.utah.edu

Office Phone: 801-587-1202 **FAX: (801) 585-5375**

Place of Birth: Boston, Massachusetts

Education:

1974	B.A. Mount Holyoke College, South Hadley, MA
1979	M.A. Boston College, Chestnut Hill, MA (Psychology)
1986	M.A. Harvard University, Cambridge, MA (Psychology)
1988	Ph.D. Harvard University, Cambridge, MA (Neuropsychology)

Postdoctoral Training:

1988-1990	Post-doctoral Fellow, Boston Neurobehavioral Institute
-----------	--

Licensure and Certification

1991	Massachusetts Licensed Psychologist (Neuropsychologist)
2008	Utah Licensed Psychologist (Neuropsychologist)

Academic Appointments:

1988-1995	Instructor of Psychology in the Department of Psychiatry, Harvard Medical School, Boston, MA
1996-1999	Assistant Professor of Psychology in the Department of Psychiatry, Harvard Medical School, Boston, MA
1998-	Lecturer in Psychiatry in the Department of Behavioral Neuroscience, Boston University School of Medicine, Boston, MA
1999-	Associate Professor of Psychology in the Department of Psychiatry, Harvard Medical School, Boston, MA
2008-	Research Associate, Department of Psychiatry, Harvard Medical School, Boston MA
2008-	Professor of Psychiatry, University of Utah School of Medicine

Hospital Appointments or Affiliated Institution Appointments:

1983-1988	Assistant Investigator, Laboratories for Psychiatric Research, Mailman Research Center, McLean Hospital, Belmont, MA
-----------	--

1988-1992	Assistant Neuropsychologist, Neurology Department, McLean Hospital, Belmont, MA
1988-1995	Assistant Research Psychologist, Laboratories for Psychiatric Research, Mailman Research Center, McLean Hospital, Belmont, MA
1995-2004	Associate Research Neuropsychologist, McLean Hospital, Belmont, MA
2004-2008	Research Neuropsychologist, McLean Hospital, Belmont, MA
2008-	USTAR Investigator, University of Utah School of Medicine, Salt Lake City, UT
2008-	Clinical Neuropsychologist, Utah Neuropsychiatric Institute, Salt Lake City, UT
2008-	Health Science Specialist, VAMC, Salt Lake City, UT
2009-	Associate Director, MIRECC VISN 19, Salt Lake City, UT

Hospital and Health Care Organization Service Responsibilities:

1995-2008	Director of Neuropsychology, Brain Imaging Center, McLean Hospital, Belmont, MA
1998-2008	Director of Cognitive Neuroimaging, Brain Imaging Center, McLean Hospital, Belmont, MA
2008-	Director, Cognitive Neuroimaging, The Brain Institute, University of Utah, Salt Lake City, UT

Major Administrative Responsibilities:

2001-2003	Reviewer, NIH Scientific Review Group (ZRG1, BDCN-5, 6)
2004-	Reviewer, NIH Scientific Review Group (NPAS 1)
2004	Reviewer, NIH Scientific Review Group (ZMH1 NRB-Q (05))
2004	Chair, Mysell Committee, Harvard Medical School
2009	Reviewer, NIMH Board of Scientific Counselors for Intramural Clinical Research

Major Committee Assignments:

1998-	Mysell Committee, Harvard Medical School
1998-	Scientific Advisory Committee, Boston Environmental Hazards Center, Boston University School of Public Health

Professional Society Involvement:

1987-	International Neuropsychological Society
1992-	Massachusetts Neuropsychological Society
1993-	Society for Research in Psychopathology
1993-	International Society for Magnetic Resonance in Medicine
1994-	Society of Magnetic Resonance
1994-	Society of Biol Psychiatry
1996-	Society for Neuroscience
1998-	American College of Neuropsychopharmacology

Editorial Boards:

1988-	Ad hoc reviewer, Schizophrenia Bulletin
1989-	Ad hoc reviewer, Schizophr Res
1992-	Ad hoc reviewer, American Journal of Psychiatry

1994-	Ad hoc reviewer, Archives of General Psychiatry
1994-	Ad hoc reviewer, Psychiatric Research
1994-	Ad hoc reviewer, Comprehensive Psychiatry
1999-	Editorial Board, Schizophr Res
1999-	Ad hoc review, Journal of the International Neuropsychological Society
2006-	Advisory Board, Acta Neuropsychiatrica
2006-	Editorial Board, Brain Imaging and Behavior

Awards and Honors:

1984	The 1902 Fellowship, Mount Holyoke College
1990	NARSAD Young Investigator Award
1994	NIMH First Award
1995	Alfred Pope Award, McLean Hospital
1996	NARSAD Young Investigator Award
2001	Scientific Advisory Board, Human Brain Mapping

PART II: Research, Teaching, and Clinical Contributions

A. Narrative Report of Research, Teaching, and Clinical Contributions

The focus of my research has been on the identification of brain abnormalities, particularly disruptions of the fronto-temporal network, which may represent risk factors for psychiatric illness or may be the site of primary pathology in these illnesses. Research studies have primarily included the application of neuropsychological measures, neurological hard signs, and magnetic resonance imaging methods completed both in patients and their well relatives. In recent years, this work has been extended by applying magnetic resonance techniques to study the effects of development on cortico-limbic networks in healthy children and adolescents. Additional ongoing studies have examined changes in these same networks produced by therapeutic antipsychotic drugs, as well as drugs of abuse. Future investigations will continue to examine the similarities and differences between functional cortical brain changes associated with pharmacotherapy of adult illness and healthy development.

B. Research Funding Information:

Current Research Support

Years Funded	Funding Source	Role	Grant Title
Federal Grants			
2004-2009	NIMH/RO1	PI	fMRI of Frontal and Limbic Regions in Bipolar Patients
2004-2009	Department of Veterans Affairs	Co-I	Suicide and Suicidality in Veterans
2005-2010	NIMH/R01	Co-PI	MRI-MRSI Studies of Bipolar Treatment Response
2006-2011	NIMH/PO1	Co-PI	Glutamnergic Dysfunction in Schizophrenia

			(fMRI and MRS Section)
2007-2009	NIDA/R21	PI	Brain Changes with Cannabis and Methamphetamine
2007-2009	NIDA/R21	Co-I	Marijuana and Mood: Frontal Predictors of Behavior
2007-2012	NIDA/R01	PI	MRS/fMRI Investigations of Adolescent Cannabis Use
2009-2013	Department of Veterans Affairs	PI	Neurobiology of Suicide Risk in Traumatic Brain Injury and Substance Abuse
Pharmaceutical Grants			
2005-2007	Janssen	PI	Recovery of Metabolic Function in Bipolar Patients Following Risperdal Conta Augmentation
2006-2007	Kyowa Hakko	PI	The Effect of Citicoline on the Brain in Healthy Adults, as Measured by fMRI and ³¹ P-MRS
2006-2009	Novartis	PI	Investigation of the Neurobiological Basis of CCK-4 Induced Panic in Humans
2009-2010	Kyowa Hakko	PI	Cognizin Citicoline: Effect on Cognition

Past Research Support

Years Funded	Funding Source	Role	Grant Title
Federal Grants			
1990-1995	NIMH/PO1	Co-PI	Biological Research in Schizophrenia: MRI Section (PI)
1991-1994	NIDA/RO1	Co-PI	Neuropsychological Effects of Marijuana Use
1994-2000	NIMH/FIRST Award	PI	Proton Spectroscopy and Imaging in Schizophrenia
1996-2000	NIDA/RO1	Co-PI	Residual Neuropsychological Effects of Marijuana
1996-2001	NIMH	Co-Inv	Frontal lobe structure and function in depressed adolescents
1997-1999	NIMH/R01	Co-PI	Obstetric Complications and Pathology in Bipolar Illness

1997-2001	Center for Disease Control	PI	Cognitive Function and Symptom Patterns in Gulf War Veterans (fMRI section)
1998-2001	CIA	PI	fMRI Study of the Neural Correlates of Deception (fMRI section)
1998-2003	NIMH/R01	Co-PI	Obstetric Complications and Pathology in Schizophrenia
1998-2003	NIMH/R01	Co-PI	Creativity and Liability in Schizophrenia
1998-2003	NIMH/R01	Co-PI	Brain Choline Uptake and Late Life Mental Illness
1999-2002	NIMH/P01	PI	Biological Research in Schizophrenia (fMRI Section)
1999-2003	NIMH/RO1	PI	Residual Cognitive Effects of Cannabis: An fMRI Study
2000-2005	NIMH/PO1	Co-PI	Glutamnergic Dysfunction in Schizophrenia (fMRI and MRS Section)
2002-2004	NIMH/R21	PI	Neural Correlates of Social Emotion in Major Depression (fMRI section)
2002-2004	NICH/RO3	PI	fMRI of Unconscious Affect Processing in Adolescents

Private Grants

1986-1988	Scottish Rite Schizophrenia Program	Co-PI	Neurological Hard Signs in Schizophrenia
1992-1994	NARSAD Young Investigator Award	PI	Proton Spectroscopy of Schizophrenic Patients
1993-1994	Hood Foundation	Co-PI	Morphometric brain MRI in normal children
1993-1995	Scottish Rite Schizophrenia Program	PI	Cognitive Challenge Using Echo-Planar MRI
1995-1997	Stanley Foundation	Co-PI	Frontal Lobe Structure and Function in Depressed Adolescents
1996-1998	Hood Foundation	Co-PI	High Resolution MRI and fMRI in Normal Adolescents
1996-1998	NARSAD Young	PI	Echo Planar Imaging in the Temporal Lobes

	Investigator Award		of Schizophrenics
1999-2001	Hood Foundation	PI	Cortical fMRI Changes During Development In Children and Adolescents: fMRI studies
1999-2002	NAAR	PI	Applications of fMRI to the Study of Risk Factors in Autism
2001-2005	Hood Foundation	PI	Affective Learning in Children and Adolescents
2003-2005	International Institute for Borderline Studies	PI	Emotional Processing of Psychosocial Stimuli in Borderline Personality Disorder: An fMRI Study
Pharmaceutical Grants			
1987-1989	Eli Lilly	PI	Cognitive Effects of Fluoxetine Treatment
1994-1995	Interneuron Pharmaceuticals, Inc.	Co-PI	Proton MRS studies on the effects of CDP-choline in brain in vivo.
1995-1996	Bracco Diagnostics	Co-PI	Cerebral Blood Volume Mapping in Patients with Psychotic Disorders
1995-1996	Eli Lilly, Inc.	PI	fMRI Studies of Psychotic Patients Before and After Olanzapine Treatment
1997-1999	Pfizer, Inc.	PI	Comparison of Normal Controls and Schizophrenics on Ziprasidone using fMRI challenge paradigms
1999-2004	Eli Lilly, Inc	PI	Olanzapine vs. Lithium in Relapse Prevention in Bipolar Disorder
2002-2003	Repligen Corporation	PI	Effects of Secretin on Facial Affect: An fMRI Study
2002-2004	Eli Lilly, Inc	PI	Bipolar Health Outcomes

C. Report of Current Research Activities

fMRI of Frontal and Limbic Regions in Bipolar Patients	PI
Glutamnergic Dysfunction in Schizophrenia (fMRI and MRS Section)	Co-PI
Brain Changes with Cannabis and Methamphetamine	PI
MRS/fMRI Investigations of Adolescent Cannabis Use	PI

Recovery of Metabolic Function in Bipolar Patients Following Risperdal Contingent Augmentation	PI
The Effect of Citicoline on the Brain in Healthy Adults, as Measured by fMRI and ³¹ P-MRS	PI
Investigation of the Neurobiological Basis of CCK-4 Induced Panic in Humans	PI

D. Report of Teaching

1. Local Contributions

a. Medical School Courses

1997

Lecturer on the neurobiology of schizophrenia and functional neuroimaging Neurobiology Series,
Tufts University / New England Medical Center
30-40 fellows/session
8-10 hours/year

1998-2000

Lecturer on the neurobiology of schizophrenia and cortical development
Child psychiatry residents, Harvard Medical School
8-12 residents/session
10-12 hours/year

b. Graduate Medical Courses

1996-1997

Lecturer on neuropsychology
psychiatry residents and neuroscience fellows at McLean Hospital
8-10 residents/session
12-16 hours/year

1997

Lecturer on neuroanatomy and functional neuroimaging
Clinical Neuroscience Training Program, McLean Hospital
20-30 students/session
8-12 hours/year

2000-2004

Lecturer on MRS and fMRI in neuropsychiatric disorders
Seminar in Neuroimaging, Boston University School of Medicine
10-18 students/session
8-10 hours/year

c. Local Invited Teaching Presentations

1995-1996

Lecturer on neuroimaging in psychotic disorders
undergraduate and graduate students in the psychology department, Harvard University
12-25 students/session
10-15 hours/year

1998

Featured Speaker
Whitehead Institute for Biomedical Research (MIT)
Brain and Psyche: The Neurobiology of Self
“Functional Brain Changes in Adolescence”
Cambridge, MA

2000

Invited Speaker
Harvard Medical School/Cambridge City Hospital
Conference on Adolescent Self Destruction
“The Neurobiology of Adolescent Behavior: fMRI Studies”
Boston, MA

2003

Grand Rounds Presentation
University of Massachusetts Medical School
“fMRI of Psychiatric Disorders”
Worcester, MA

2003

Invited Speaker
Advanced Training Institute in Functional Magnetic Resonance Imaging (fMRI) at the Mass
General Hospital’s Martinos NMR Center in association with MIT and Harvard Medical School
“Overview of Psychiatric Applications of Functional MRI”
Charlestown, MA

d. Continuing Medical Education Courses

2003

Invited Speaker
American Academy of Child and Adolescent Psychiatry
“Neurobiology of Marijuana Use”
Miami, FL

2004

Invited Speaker
Neuroradiology Education and Research Foundation
“Organization of Brain Function in Psychosis, Lessons from Functional Imaging”
Seattle, WA

e. Advisory and Supervisory Responsibilities:

1994-1995

Jerry Lin, M.D./Ph.D. candidate, Harvard/MIT HST Program

Faculty sponsor for AFAR Fellowship Award. Fellowship to study verbal memory processing in normal aging using functional magnetic resonance imaging.

250 hours per year.

1994-1995

Hiroyu Hatano, A.B., M.D. candidate, Stanford University.

Faculty supervisor, Psychology Faculty Prize, Harvard University. Supervision of senior honors thesis on correlations between brain metabolite concentrations and neuropsychological functioning in schizophrenia.

150 hours per year.

1994-1995, 1997-2001

Staci Gruber, Ed.M, M.S., Ph.D. candidate in psychology, Tufts University.

Supervision: Pre-doctoral research, applications of neuropsychology and neuroimaging in psychopathology. Advisor: Master's thesis, Doctoral thesis, fMRI studies of frontal functions.

Tufts University Pre-doctoral Fellowship Award. Mentor/Sponsor for ISTART grant.

250 hours per year.

1994-2001

Srinivasan Pillay, M.D. Postdoctoral fellow in structural MR imaging. Sponsor for Lilly Biol

Psychiatry Travel Award. Post-doctoral fellow in fMRI of anxiety disorders. Mentor/Sponsor for NARSAD Young Investigator Award.

150 hours per year.

1995-1997

Constance Moore, Ph.D. Postdoctoral fellow in psychiatric neuroimaging. Sponsor for International Congress on Schizophrenia Research Young Investigator Award.

150 hours per year.

1996-1997

John Levine, M.D., Ph.D.

Postdoctoral supervision. Supervised analyses and interpretation of fMRI data and clinical rating scales.

50 hours per year.

1997-1999

Abigail Baird, M.A., Ph.D. candidate in psychology, Harvard University.

Pre-doctoral research supervision in the application of fMRI techniques to the study of human cortical development. Sponsor for Health Emotions Research Institute, Smadar Levin Award.

250 hours per year.

1997-2004

Russell Loeber, M.D./Ph.D. candidate in Behavioral Neuroscience, Boston University. Doctoral research advisor. Supervision in the application of blood volume neuroimaging techniques to the study of psychotropic medication on the cerebellum. Mentor/sponsor for NRSA Award. 300 hours per year.

1997-1998

Shelly Kapoor, B.S. Supervision of senior honors thesis on the application of blood volume techniques to the study of lateralized functional deficits in schizophrenia. Awarded highest honors by Tufts University. 150 hours per year.

1997-1998

Khashayar Vakili, B.S., M.A., M.D. candidate, Boston University. Master's thesis advisor. Supervision in the application of structural MR methods to the study of morphometric changes over time in depression. 125 hours per year.

1997-2001

Elizabeth Quattrochi, M.D., Ph.D. Postdoctoral fellow in the application of fMRI techniques to study nicotinic receptor activation in schizophrenia. Mentor/sponsor for NARSAD Young Investigator Award, DuPont-Warren Fellowship. 100 hours per year

1999-2002

Ika Rogowska, Ph.D. Assistant Professor, McLean Hospital. Mentor/sponsor for NARSAD Young Investigator Award for modeling fMRI data in psychotic disorders. 200 hours per year

1999-2002

Hadine Joffe, M.D. Postdoctoral fellow in the application of neuropsychological testing and functional imaging to the study of the effects of hormone replacement therapy. Mentor/sponsor for the Pfizer Fellowship Award in Women's Health (1999-2002). 25 hours per year

1999-2002

Matthew Belmonte, B.A., M.S., M.F.A., Ph.D. candidate in Behavioral Neuroscience, Boston University. Doctoral thesis advisor. Supervision in the application of fMRI methods to the study of abnormal spatial attention. 200 hours per year.

2002-

Isabelle Rosso, Ph.D. Postdoctoral fellow. Mentor/sponsor for NIMH K01 Award. 200 hours per year.

2003-

Marisa Silveri, Ph.D. Mentor/sponsor for NIAAA K01 Award.

200 hours per year.

2003-

Donna Murray, BMT, Ph.D. candidate in Behavioral Neuroscience Boston University. Doctoral Thesis Advisor.

50 hours per year.

2. Regional, National, and International Contributions

a. Invited Regional Presentations

1994

Invited Speaker

Society for Biological Psychiatry

“Echo Planar MRI of Schizophrenics and Normal Controls During Word Production”

Philadelphia, PA

1996

Invited Speaker

Society of Biological Psychiatry Meeting

“Neuropsychological Deficits in Marijuana Smokers”

New York, NY

1996

Plenary Session / Invited Panelist

Society of Biological Psychiatry Meeting

“Magnetic Resonance Imaging in Schizophrenia”

New York, NY

1999

Invited Speaker

Third International Congress on Bipolar Disorder

“fMRI Studies of Affect Recognition in Healthy Adolescents and Adults with Bipolar Disorder”

Philadelphia, PA

2003

Grand Rounds Presentation

New York University Child Study Center

“Neuroimaging in Healthy Adolescents”

New York, NY

2004

Invited Speaker

American Psychiatric Association

“Functional Neuroanatomy of Psychiatric Disorders”

New York, NY

2004

Invited Speaker

American Psychiatric Association,
“Cognitive Functioning Outcomes: From First Episode to Functional Recovery”
New York, NY

2004

Invited Speaker
American Psychiatric Association
“Optimizing Functional Outcome in Bipolar Disorder”
New York, NY

b. Invited National Presentations

1991

Invited Speaker
National Alliance for Research on Schizophrenia and Depression
“Correlation of Frontal Lobe Anatomical Volume Loss with Behavioral Test Deficits in Chronic Schizophrenic Patients”
Washington, DC

1993

Invited Speaker
Society for Biological Psychiatry
“1H MRS of N-Acetyl Aspartate in the Temporal Lobes in Schizophrenia”
San Francisco, CA

1994

Invited Speaker
Society for Personality Assessment
“Neuropsychological Profiles Associated with Schizophrenia Spectrum Disorders”
Chicago, IL

1997

Invited Speaker
Society of Biol Psychiatry Meeting
“Antipsychotic Drug Effects on fMRI in Schizophrenia”
San Diego, CA

1998

Invited Speaker
College on Problems of Drug Dependence Annual Meeting
“Residual Effects of Marijuana Use: An fMRI Study”
Scottsdale, AZ

1998

Workshop / Invited Panelist
National Institute on Aging
“fMRI of Residual Effects of Marijuana in Middle Aged Subjects”
Washington, DC

1999

Invited Speaker

National Institute of Child Health and Human Development/National Institute of Mental Health/National Institute of Neurological Disorders and Stroke/Inter-Institute Invitational Conference

“Overview of Current work in fMRI: Affect and Emotion”

Leesburg, VA

1999

Invited Speaker

National Institute on Drug Abuse, National Institutes of Health

“fMRI Studies of Adolescent and Adult Subjects”

Rockville, MD

1999

Invited Speaker

American Academy of Child and Adolescent Psychiatry

“Functional MRI Studies in Healthy Adolescents and Adults with Bipolar Disorder”

Chicago, IL

2001

Invited Speaker

Society of Biological Psychiatry

“Integrating Clinical Measures with Functional Neuroimaging to Clarify the Neurophysiology of Bipolar Disorder.

New Orleans, LA

2001

Invited Speaker

National Institute on Alcohol Abuse

“Application of Neuroimaging Techniques to the Study of Brain Functions in Adolescents”

Bethesda, MD

2001

Invited Speaker

American Psychological Association

“Developmental changes in Frontal-Amygdala Response: Substance Abuse Treatment Implications”

San Francisco, CA

2001

Invited Speaker

Society for Neuroscience 31st Meeting

“Altered Frontal Activation Patterns in Abstinent Long Term Marijuana Smokers: A BOLD fMRI Study”

San Diego, CA

2002

Invited Speaker
Psychiatric Research Society
“Corticolimbic Activation in Adolescence and Adulthood: Implications for Eating Disorders”
Salt Lake City, UT

2002

Invited Speaker
National Institute of Drug Abuse Symposium: Adolescent Decision Making: Proximal Processes
in Adolescent Drug Abuse
“Neurobiological Changes During Adolescent Development: MR Findings”
Bethesda, MD

2002

Invited Speaker
International Meeting for Autism Research
“Prefrontal Activation During the Perception of Negative Emotion in Children and Adolescents”
Orlando, FL

2002

Invited Speaker
National Institute of Mental Health
Neurobiology of Bipolar Disorder: Research Workshop
Bethesda, MD

2004

Invited Speaker
University of California Davis
“Age-Related Changes in Frontal Executive Function”
Davis, CA

2004

Invited Speaker
National Institute of Mental Health
“Adolescents, the Amygdala and Emotional Information Processing”
Bethesda, MD

2005

Invited Speaker
National Institute of Mental Health
“Human Adolescent Brain Development”
Bethesda, MD

2005

Invited Keynote Speaker
Society for Neuroscience
“Emotional and Cognitive Changes Associated With Adolescent Development”
Washington, DC

2006

Invited Speaker

Sponsored by NIDA, NIMH, NICHD, and NINDS

Reward Neurocircuitry in Adolescent Development and Decision Making

“Developmental Changes in Response to Food Stimuli”

Bethesda, MD

2006

Invited Speaker

Sponsored by NIDA and NIAAA

Consequences of Marijuana Use on Brain and Behavioral Development

“Brain Development: Challenges for Marijuana Neuroimaging Studies”

Bethesda, MD

2007

Invited Speaker

American Psychiatric Association

Sponsored by NIDA

Insights on Obesity and Drug Addiction from Brain Imaging

“Modulators of Orbitofrontal Activation in Response to Food Stimuli”

San Diego, CA

c. Invited International Presentations

1994

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“Functional MRI of Schizophrenics and Normal Controls During Word Production”

San Juan, Puerto Rico

1995

Invited Speaker

Formation et Recherche en Neurosciences Appliquees a la Psychiatrie

“1H Spectroscopy of the Temporal Lobes in Schizophrenic and Bipolar Patients”

Rouffach, France

1995

Invited Speaker

Formation et Recherche en Neurosciences Appliquees a la Psychiatrie

“Echo Planar MRI of Schizophrenics and Normal Controls During Word Production”

Rouffach, France

1995

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“Sex Differences in fMRI Activation for Language Processes in Schizophrenic Patients and Controls”

San Juan, Puerto Rico

1995

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“Proton Spectroscopy in Schizophrenia”

San Juan, Puerto Rico

1996

Plenary Session /Invited Panelist

World Psychiatric Association

“fMRI Studies of Altered Brain Activation During Verbal Memory Tasks in Schizophrenia”

Madrid, Spain

1996

Plenary Session/ Invited Panelist

American College of Neuropsychopharmacology Annual Meeting: Human Brain Development

“MR Spectroscopy in Children and Adolescents”

San Juan, Puerto Rico

1997

Invited Speaker

European Winter Conference on Brain Research

“Obsessive-Compulsive Disorder Among Schizophrenic Patients: An Exploratory Study using Functional Magnetic Resonance Imaging Data”

Les Arcs, France

1997

Invited Speaker

“Antipsychotic Drug Effects on Cortical Activation, as Measured by fMRI in Schizophrenia”

San Juan, Puerto Rico

1997

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“Magnetic Resonance Studies of Drug Effects in Man”

San Juan, Puerto Rico

1998

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“fMRI of Cortical Changes in Bipolar Disorder: BOLD and DSCMRI Studies”

San Juan, Puerto Rico

1998

Invited Speaker

American College of Neuropsychopharmacology Annual Meeting

“MRS Studies of Brain Biochemistry During Childhood in Health and in Neuropsychiatric Illness”

San Juan, Puerto Rico

2002

Invited Speaker

American College of Neuropsychopharmacology

“Differential Activation in Bipolar Patients During Emotional and Cognitive Processing”

San Juan, PR

2003

Invited Speaker

“Advances in Treatment and Diagnosis in Child and Adolescent Psychiatry”

Canadian Academy of Child and Adolescent Psychiatry, Halifax, Canada

2004

Invited Speaker

Scandinavian College of Neuropsychopharmacology Annual meeting

“Impact of Neurocognitive Status on Future Functioning in Schizophrenia and Bipolar Disorder”

Juan Les Pins, France

2005

Invited Speaker

Annual Meeting of the Finnish Psychiatric Association

“Cognitive Functioning in Bipolar Disorder”

Helsinki, Finland

2006

Invited Speaker

WPA International Congress: New Insights on the Pathophysiology of Bipolar Disorder

“Corticolimbic fMRI Activation in Bipolar Disorder During Viewing of Fearful Facial Affect”

Istanbul, Turkey

d. Professional and educational leadership role related to teaching

2001

International Congress on Schizophrenia Research

Invited Chair for Symposium

“Functional Neuroimaging”

Whistler, British Columbia

2002

Invited Speaker

Suffolk Law School,

Fourth Annual Juvenile Justice Conference: Applying Behavioral Science to Juvenile Advocacy

“Corticolimbic Activation in Adolescence and Adulthood”

Boston, MA

2003

Blending Conference Workshop

Invited Speaker

"Craving, Decision Making, and Addiction: What Does New Knowledge about the Brain tell us about Treatment?"

Westminister, CO

PART III. BIBLIOGRAPHY:

Original reports:

1. Morest DK, Ard MD, Yurgelun-Todd DA. Degeneration in the central auditory pathways after acoustic deprivation or over-stimulation. *Anatomical Record* 1978;193(3):750.
2. Tolbert LP, Morest DK, Yurgelun-Todd DA. The neuronal architecture of the anteroventral cochlear nucleus of the cat in the region of the cochlear nerve root: Horseradish peroxidase labeling of identical cell types. *Neuroscience* 1982;7(12):3030-52.
3. Pope HG, Hudson JI, Jonas JM, Yurgelun-Todd D. Bulimia treated with migraine: A placebo-controlled double-blind study. *Am J Psychiatry* 1983;140(5):554-8.
4. Hudson JI, Pope HG, Jonas JM, Yurgelun-Todd D. Family history study of anorexia nervosa and bulimia. *Br J Psychiatry* 1983;142:133-8.
5. Pope HG, Ionescu-Pioggia M, Yurgelun-Todd D. Migration and manic-depressive illness. *Compr Psychiatry* 1983;24(2):158-65.
6. Hudson JI, Pope HG, Jonas JM, Yurgelun-Todd DA. Phenomenologic relationship of eating disorders to major affective disorder. *Psychiatry Res* 1983;9(4):345-54.
7. Pope HG, Hudson JI, Yurgelun-Todd DA. Anorexia nervosa and bulimia among 300 suburban women shoppers. *Am J Psychiatry* 1984;141(2):292-4.
8. Pope HG, Hudson JI, Yurgelun-Todd DA, Hudson MS. Prevalence of anorexia nervosa and bulimia in three student populations. *Internatl J of Eating Disorders* 1984;3:45-51.
9. Pope HG, Hudson JI, Poskanzer DA, Yurgelun-Todd D. Familial hyperkalemic periodic paralysis and manic-depressive illness: A linkage and treatment study. *Biol Psychiatry* 1984;19(10):1449-59.
10. Hudson JI, Pope HG, Jonas JM, Yurgelun-Todd D. Treatment of anorexia nervosa and antidepressants. *J Clin Psychopharmacol* 1985;5(1):17-23.
11. Pope HG, Hudson JI, Jonas JM, Yurgelun-Todd D. Antidepressant treatment of bulimia: A two-year follow-up study. *J Clin Psychopharmacol* 1985;5(6):320-7.
12. Pope HG, Herridge PL, Hudson JI, Fontaine R, Yurgelun-Todd D. Treatment of bulimia with nomifensine. *Am J Psychiatry* 1986;143(3):371-3.

13. Woods BT, Kinney DK, Yurgelun-Todd D. Neurologic abnormalities in schizophrenic patients and their families I: Comparison of schizophrenic, bipolar, and substance abuse patients and normal controls. *Arch Gen Psychiatry* 1986;4(7):657-63.
14. Kinney DK, Woods BT, Yurgelun-Todd DA. Neurologic abnormalities in schizophrenic patients and their families II: Neurologic and psychiatric findings in relatives. *Arch Gen Psychiatry* 1986;43(7):665-8.
15. Woods BT, Yurgelun-Todd DA, Kinney DK. Relationship of neurological abnormalities in schizophrenics to family psychopathology. *Biol Psychiatry* 1987;22(3):325-31.
16. Pope HG, Frankenburg FR, Hudson JI, Jonas JM, Yurgelun-Todd DA. Is bulimia associated with borderline personality disorder? A controlled study. *J Clin Psychiatry* 1987;48(5):181-4.
17. Hudson JI, Pope HG, Jonas JM, Yurgelun-Todd DA, Frankenburg FR. A controlled family history study of bulimia. *Psychol Med* 1987;17(4):883-90.
18. Hudson JI, Pope HG, Yurgelun-Todd DA, Jonas JM, Frankenburg FR. A controlled study of lifetime prevalence of affective disorder and other psychiatric disorders in bulimic outpatients. *Am J Psychiatry* 1987;144(10):1283-7.
19. Hudson JI, Pope HG, Wurtman J, Yurgelun-Todd D, Mark S, Rosenthal NE. Bulimia in obese individuals. Relationship to normal-weight bulimia. *J Nerv Ment Dis* 1988;176(3):144-52.
20. Pope HG, Cohen BM, Lipinski JF, Yurgelun-Todd DA. DSM-III criteria for affective disorders and schizophrenia: A preliminary appraisal using family interview findings. *Psychiatry Psychobiol* 1988;3:159-69.
21. Hudson JI, Pope HG, Yurgelun-Todd DA. Bulimia and major affective disorder: Experience with 105 patients. *Psychiatry Psychobiol* 1988;3:37-47.
22. Pope HG, Hudson JI, Yurgelun-Todd DA. Depressive symptoms in bulimic, depressed, and non-psychiatric control subjects. *J Affect Disorders* 1989;16:93-9.
23. Levin S, Yurgelun-Todd DA, Craft S. Contributions of clinical neuropsychology to the study of schizophrenia. *J Abnorm Psychol* 1989;98(4):341-56.
24. Woods BT, Yurgelun-Todd DA, Benes FM, Frankenburg FR, Pope HG, McSparren J. Progressive ventricular enlargement in schizophrenia: Comparison to bipolar affective disorder and correlation with clinical course. *Biol Psychiatry* 1990;27(3):341-52.
25. Zanarini MC, Frankenburg FR, Pope HG, Hudson JI, Yurgelun-Todd DA, Cicchetti CJ. Axis II comorbidity of normal-weight bulimia. *Compr Psychiatry* 1990;31(1):20-4.
26. Pope HG, Yurgelun-Todd DA. Schizophrenic individuals with bipolar first-degree relatives. *J Clin Psychiatry* 1990;51(3):97-101.

27. Keck PE Jr, Pope HG, Hudson JI, McElroy SM, Yurgelun-Todd DA, Hundert EM. A controlled study of phenomenology and family history in outpatients with bulimia nervosa. *Compr Psychiatry* 1990;31:275-83.
28. Woods BT, Yurgelun-Todd DA. Brain volume loss in schizophrenia: When does it occur and is it progressive? *Schizophr Res* 1991;5(3):202-4.
29. Kinney DK, Yurgelun-Todd DA, Woods BT. Hard neurologic signs and psychopathology in relatives of schizophrenic patients. *Psychiatry Res* 1991;39(1):45-53.
30. Woods BT, Kinney DK, Yurgelun-Todd DA. Neurologic hard signs and family history of psychosis in schizophrenia. *Biol Psychiatry* 1991;30(8):806-16.
31. Kinney DK, Yurgelun-Todd DA, Woods BT. Neurologic signs in paranoid and non-paranoid schizophrenics. *J Neuropsychiatry Clin Neurosci* 1992;4(4):447-9.
32. Matthyse S, Levy DL, Kinney D, Deutsch C, Lajonchere C, Yurgelun-Todd D, Woods B, Holzman PS. Gene expression in mental illness: A navigation chart to future progress. *J Psychiatric Res* 1992;26(4):461-73.
33. Pope HG, Yurgelun-Todd DA. A family interview study of schizophrenia, schizoaffective disorder, and major mood disorder: updated findings. *Europ Psychiatry* 1993;8:1-5.
34. Yurgelun-Todd DA, Kinney DK. Perinatal complications are associated with Wisconsin Card Sort Performance in non-schizophrenics: Preliminary findings. *Neuropsychiat Neuropsychol Behav Neurol* 1993;6(2):77-82.
35. Yurgelun-Todd DA, Kinney DK. Patterns of neuropsychological deficits discriminate schizophrenics from siblings and controls. *J Neuropsychiat Clin Neurosci* 1993;5(3):294-300.
36. Kinney DK, Yurgelun-Todd DA, Woods BT. Neurologic hard signs in schizophrenia and major mood disorders. *J Nerv Ment Dis* 1993;181(3):202-4.
37. Kinney DK, Yurgelun-Todd DA, Levy DL, Medoff D, Lajonchere CM, Radford-Paregol M. Obstetrical complications in patients with bipolar disorder and their siblings. *Psychiatry Res* 1993;48(1):47-56.
38. Seidman LJ, Yurgelun-Todd DA, Kremen WS, Woods BT, Goldstein JM, Faraone SV, Tsuang MT. Relationship of prefrontal and temporal lobe MRI measures to neuropsychological performance in chronic schizophrenia. *Biol Psychiatry* 1994;35(4):235-46.
39. Kinney DK, Yurgelun-Todd DA, Waternaux CM, Matthyse S. Obstetrical complications and trail making deficits discriminate schizophrenics from unaffected siblings and controls. *Schizophr Res* 1994;12:63-73.
40. Renshaw PF, Yurgelun-Todd DA, Cohen BM. Greater hemodynamic response to photic stimulation in schizophrenic patients: An echo-planar MRI study. *Am J Psychiatry* 1994;151:1493-5.

41. Kinney DK, Levy DL, Yurgelun-Todd DA, Medoff D, Lajonchere CM, Radford-Paregol M. Season of birth and obstetrical complications in schizophrenics. *J Psychiatric Res* 1994;28(6):499-509.
42. Maher BA, Manschreck TC, Woods BT, Yurgelun-Todd DA, Tsuang MT. Frontal brain volume and context effects in short-term recall in schizophrenia. *Biol Psychiatry* 1995;37(3):144-50.
43. Kouri E, Pope HG, Yurgelun-Todd D, Gruber S. Attributes of heavy vs. occasional marijuana smokers in a college population. *Biol Psychiatry* 1995;38(7):475-81.
44. Woods BT, Brennan S, Yurgelun-Todd DA, Young T, Panzarino P. MRI abnormalities in major psychiatric disorders: an exploratory comparative study. *J Neuropsychiatry Clin Neurosci* 1995;7(1):49-53.
45. Renshaw PF, Yurgelun-Todd DA, Tohen M, Gruber S, Cohen BM. Temporal lobe proton magnetic resonance spectroscopy of patients with first-episode psychosis. *Am J Psychiatry* 1995;152(3):444-6.
46. Woods BT, Yurgelun-Todd DA, Mikulis D, Pillay SS. Age-related MRI abnormalities in bipolar illness. *Biol Psychiatry* 1995;38:846-847.
47. Cohen BM, Renshaw PF, Stoll AL, Wurtman RS, Yurgelun-Todd DA, Babb SM. Decreased brain choline uptake in older adults: An in vivo proton magnetic resonance spectroscopy study. *JAMA* 1995;274:902-7.
48. Cohen BM, Yurgelun-Todd DA, English CD, Renshaw PF. Abnormalities of regional distribution of cerebral vasculature in schizophrenia detected by dynamic susceptibility contrast MRI. *Am J Psychiatry* 1995;152(12):1801-3.
49. Pope HG, Gruber AJ, Yurgelun-Todd DA. The residual effects of cannabis: the current status of research. *Drug Alcohol Depend* 1995;38:25-34.
50. Yurgelun-Todd DA, Kinney DK, Sherwood AR, Renshaw PF. Magnetic resonance in schizophrenia. *Semin Clin Neuropsychiatry* 1996;1(1):4-19.
51. Yurgelun-Todd DA, Waternaux CM, Cohen BM, Gruber SA, English CD, Renshaw PF. Functional magnetic resonance imaging of schizophrenic patients and controls during word production. *Am J Psychiatry* 1996;153(2):200-5.
52. Pope HG, Yurgelun-Todd DA. The residual cognitive effects of heavy marijuana use in college students. *JAMA* 1996;275(7):521-7.
53. Yurgelun-Todd DA, Renshaw PF, Gruber SA, Waternaux CM, Cohen BM. Proton magnetic resonance spectroscopy of the temporal lobes in schizophrenics and normal controls. *Schizophr Res* 1996;19(1):55-9.
54. Harris GJ, Lewis RF, Satlin A, English CD, Scott TM, Yurgelun-Todd DA, Renshaw PF. Dynamic susceptibility contrast MRI of regional cerebral blood volume in Alzheimer's disease. *Am J Psychiatry* 1996;153(5):721-4.

55. Steingard RJ, Renshaw PF, Yurgelun-Todd DA, Appelmans KE, Lyoo IK, Shorrock KL, Bucci JP, Cesena M, Abebe D, Zurakowski D, Young Poussaint TY, Barnes P. Structural abnormalities in brain magnetic resonance images of depressed children. *J Am Acad Child Adolesc Psychiatry* 1996;35:307-11.
56. Woods BT, Yurgelun-Todd DA, Goldstein JM, Seidman LJ, Tsuang MT. MRI brain abnormalities in chronic schizophrenia: one process or more? *Biol Psychiatry* 1996;40(7):585-96.
57. Ross MH, Yurgelun-Todd DA, Renshaw PF, Maas LC, Mendelson JH, Mello NK, Cohen BM, Levin JM. Age-related reduction in functional MRI response to photic stimulation. *Neurology* 1997;48(1):173-6.
58. Pope HG, Jacobs A, Mialet JP, Yurgelun-Todd DA, Gruber SA. Evidence for a sex-specific residual effect of cannabis on visuospatial memory. *Psychother Psychosom* 1997;66:179-84.
59. Pillay SS, Yurgelun-Todd DA, Bonello CM, Lafer B, Fava M, Renshaw PF. A quantitative magnetic resonance imaging study of cerebral and cerebellar gray matter volume in primary unipolar major depression: Relationship to treatment response and clinical severity. *Biol Psychiatry* 1997;42(2):79-84.
60. Renshaw PF, Lafer B, Babb SM, Fava M, Stoll AL, Christensen JD, Moore CM, Yurgelun-Todd DA, Bonello CM, Pillay SS, Rothschild AJ, Nierenberg AA, Rosenbaum JF, Cohen BM. Basal ganglia choline levels in depression and response to fluoxetine treatment: An in vivo proton magnetic resonance spectroscopy study. *Biol Psychiatry* 1997;41(8):837-43.
61. Frederick BB, Satlin A, Yurgelun-Todd DA, Renshaw PF. In vivo proton magnetic resonance spectroscopy of Alzheimer's disease in the parietal and temporal lobes. *Biol Psychiatry* 1997;42(2):147-50.
62. Levin JM, Ross MH, Mendelson JH, Kaufman MJ, Yurgelun-Todd DA, Cohen BM, Renshaw PF. Reduction in BOLD response to photic stimulation after ethanol administration. *Psychiatry Res: Neuroimaging* 1998;82:135-46.
63. Pillay SS, Renshaw PF, Bonello CM, Lafer B, Fava M, Yurgelun-Todd DA. A quantitative MRI study of caudate and lenticular gray matter volume in primary unipolar major depression: Relationship to treatment response and clinical severity. *Psychiatry Res: Neuroimaging* 1998;84(2-3):61-74.
64. Salisbury DF, Shenton ME, Sherwood AR, Fischer IA, Yurgelun-Todd DA, Tohen M, McCarley RW. First-episode schizophrenic psychosis differs from first-episode affective psychosis and controls in P300 amplitude over left temporal lobe. *Arch Gen Psychiatry* 1998;55(2):173-80.
65. Kwon JS, Shenton ME, Hirayasu Y, Salisbury DF, Fischer IA, Dickey CC, Yurgelun-Todd DA, Tohen M, Kikinis R, Jolesz FA, McCarley RW. MRI study of cavum septi pellucidi in schizophrenia, affective disorder and schizotypal personality disorder. *Am J Psychiatry* 1998;155(4):509-15.

66. Levine JB, Gruber SA, Baird AA, Yurgelun-Todd DA. Obsessive-compulsive disorder among schizophrenic patients: an exploratory study using functional magnetic resonance imaging data. *Compr Psychiatry* 1998;39(5):308-11.
67. Kinney DK, Levy DL, Yurgelun-Todd DA, Tramer SJ, Holzman PS. Inverse relationship of perinatal complications and eye tracking dysfunctions in relatives of patients with schizophrenia: Evidence for a two-factor model. *Am J Psychiatry* 1998;155(7):976-8.
68. Maher BA, Manschreck TC, Yurgelun-Todd DA, Tsuang MT. Hemispheric asymmetry of frontal and temporal gray matter and age of onset in schizophrenia. *Biol Psychiatry* 1998;44(6):413-7.
69. Kinney DK, Yurgelun-Todd DA, Tohen M, Tramer S. Pre- and perinatal complications and risk for bipolar disease. *J Affect Disord* 1998;50(2-3):117-24.
70. Harris GT, Lewis RF, Satlin A, English CD, Scott TM, Yurgelun-Todd DA, Renshaw PF. Dynamic susceptibility contrast MR imaging of regional cerebral blood volume in Alzheimer disease: a promising alternative to nuclear medicine. *Am J Neuroradiol* 1998;19(9):1727-32.
71. Hirayasu Y, Shenton ME, Salisbury DF, Dickey CC, Fischer IA, Mazzoni P, Kisler T, Arakaki H, Kwon JS, Anderson JE, Yurgelun-Todd DA, Tohen M, McCarley RW. Lower left temporal lobe MRI volumes in patients with first episode schizophrenia compared with psychotic patients with first episode affective disorder and normal subjects. *Am J Psychiatry* 1998;155(10):1384-91.
72. Baird AA, Gruber SA, Fein DA, Maas LC, Steingard RJ, Renshaw PF, Cohen BM, Yurgelun-Todd DA. Functional magnetic resonance imaging of facial affect recognition in children and adolescents. *J Am Acad Child Adolesc Psychiatry* 1999;38(2):195-9.
73. Yurgelun-Todd DA, Renshaw PF. Applications of functional MR imaging to research in psychiatry. *Neuroimaging Clin N Am.* 1999;9(2):295-308.
74. Kinney DK, Yurgelun-Todd DA, Woods BT. Neurologic signs of cerebellar and cortical sensory dysfunction in schizophrenics and their relatives. *Schizophr Res* 1999;35(2):99-104.
75. Loeber RT, Sherwood A, Renshaw PF, Cohen BM, Yurgelun-Todd DA. Differences in cerebellar blood volume in schizophrenia and bipolar disorder. *Schizophr Res* 1999;37(1):81-9.
76. Kinney DK, Levy DL, Yurgelun-Todd DA, Lajonchere CM, Holzman, PS. Eye-tracking dysfunction and birth-month weather in schizophrenia. *J Abnorm Psychol* 1999;108(2):359-62.
77. Loeber RT, Yurgelun-Todd DA. Human neuroimaging of acute and chronic marijuana use: Implications for frontocerebellar dysfunction. *Hum Psychopharmacol Clin Experiment* 1999;14:291-304.
78. Christensen JD, Yurgelun-Todd DA, Babb SM, Gruber SA, Cohen BM, Renshaw PF. Measurement of human brain dexfenfluramine concentration by 19F magnetic resonance spectroscopy. *Brain Res* 1999;834(1-2):1-5.

79. Hirayasu Y, Shenton ME, Salisbury DF, Kwon JS, Wible CG, Fischer IA, Yurgelun-Todd DA, Zarate C, Kikinis R, Jolesz FA, McCarley RW. Subgenual cingulate cortex volume in first-episode psychosis. *Am J Psychiatry* 1999;156(7): 1091-3.
80. Kinney DK, Steingard RJ, Renshaw PF, Yurgelun-Todd DA. Perinatal complications and abnormal proton metabolite concentration in frontal cortex of adolescents seen on magnetic resonance spectroscopy. *Neuropsychiat Neuropsychol Behav Neurol* 2000;13(1):8-12.
81. Vakili K, Pillay SS, Lafer B, Fava M, Renshaw PF, Bonello-Cintron CM, Yurgelun-Todd DA. Hippocampal volume in primary unipolar depression: A magnetic resonance imaging study. *Biol Psychiatry* 2000;47(12):1087-90.
82. Manschreck TC, Maher B, Candela SF, Redmond D, Yurgelun-Todd DA, Tsuang M. Impaired verbal memory is associated with impaired motor performance in schizophrenia: relationship to brain structure. *Schizophr Res* 2000;43(1):21-32.
83. Stoll AL, Renshaw PF, Yurgelun-Todd DA, Cohen BM. Neuroimaging in bipolar disorder: What have we learned? *Biol Psychiatry* 2000;48(6):505-17.
84. Killgore WD, Cassanto DJ, Yurgelun-Todd DA, Maldjian JA, Detre JA. Functional activation of the left amygdala and hippocampus during associative encoding. *Neuroreport* 2000;(10):2259-63.
85. Hirayasu Y, McCarley RW, Salisbury DF, Tanaka S, Kwon JS, Frumin M, Snyderman D, Yurgelun-Todd DA, Kikinis R, Jolesz FA, Shenton ME. Planum temporale and Heschl gyrus volume reduction in schizophrenia: a magnetic resonance imaging study of first-episode patients. *Arch Gen Psychiatry* 2000;57(7):692-9.
86. Yurgelun-Todd DA, Gruber SA, Kanayama G, Killgore WDS, Baird AA, Young AD. fMRI during affect discrimination in bipolar affective disorder. *Bipolar Disord* 2000;2(3 Pt 2):237-48.
87. Moore CM, Breeze JL, Gruber SA, Babb SM, Frederick BB, Villafuerte RA, Stoll AL, Hennen J, Yurgelun-Todd DA, Cohen BM, Renshaw PF. Choline, myo-inositol, and mood in bipolar disorder: a proton magnetic resonance spectroscopic imaging study of the anterior cingulate cortex. *Bipolar Disord* 2000;2(3 Pt 2):207-16.
88. Steingard RJ, Yurgelun-Todd DA, Hennen J, Moore JC, Moore CM, Vakili K, Young AD, Katic A, Beardslee WR, Renshaw PF. Increased orbitofrontal cortex levels of choline in depressed adolescents as detected by in vivo proton magnetic resonance spectroscopy. *Biol Psychiatry* 2000;48(11):1053-61.
89. Belmonte M, Yurgelun-Todd DA. Permutation testing made practical for functional magnetic resonance image analysis. *IEEE Transact Med Imaging* 2001;20(3):243-8.
90. Hirayasu Y, Tanaka S, Shenton ME, Salisbury DF, DeSantis MA, Levitt JJ, Wible C, Yurgelun-Todd D, Kikinis R, Jolesz FA, McCarley RW. Prefrontal gray matter volume reduction in first episode schizophrenia. *Cereb Cortex* 2001;11(4):374-81.

91. Loeber RT, Cintron CMB, Yurgelun-Todd DA. Morphometry of individual cerebellar lobules in schizophrenia. *Am J Psychiatry* 2001;158(6):952-4.
92. Cohen BM, Yurgelun-Todd DA. Alterations in thalamic activity in schizophrenics and in response to antipsychotic drugs: Studies in the legacy of Seymour S. Kety. *Neuropsychopharmacol* 2001;25(3):305-12.
93. Killgore WD, Yurgelun-Todd DA. Sex differences in amygdala activation during the perception of facial affect. *NeuroReport* 2001;12(11):2543-7.
94. Killgore WD, Oki M, Yurgelun-Todd DA. Sex-specific developmental changes in amygdala responses to affective faces. *NeuroReport* 2001;12(2):427-33.
95. Pope HG, Gruber AJ, Hudson JI, Houston M, Yurgelun-Todd DA. Neuropsychological performance in long-term cannabis users. *Arch Gen Psychiatry* 2001;58(10):909-15.
96. Pope HG, Gruber AJ, Yurgelun-Todd DA. Residual neuropsychologic effects of cannabis. *Curr Psychiatry Rep* 2001;3(6):507-12.
97. Babb SM, Wald LL, Cohen BM, Villafuerte RA, Gruber SA, Yurgelun-Todd DA, Renshaw PF. Chronic citicholine increases phosphodiesterases in the brains of healthy older subjects: an in vivo phosphorus magnetic resonance spectroscopy study. *Psychopharmacology (Berl.)* 2002;161(3):248-254.
98. Loeber RT, Gruber SA, Cohen BM, Renshaw PF, Sherwood AR, Yurgelun-Todd DA. Cerebellar blood volume in bipolar patients correlates with medication. *Biol Psychiatry* 2002;51(5):370-6.
99. Goff DC, Hennen J, Lyoo IK, Tsai G, Wald LL, Evins AE, Yurgelun-Todd DA, Renshaw PF. Modulation of brain and serum glutamatergic concentrations following a switch from conventional neuroleptics to olanzapine. *Biol Psychiatry* 2002;51(6):493-7.
100. McCarley RW, Salisbury DF, Hirayasu Y, Yurgelun-Todd DA, Tohen M, Zarate C, Kikinis R, Jolesz FA, Shenton ME. Association between smaller left posterior superior temporal gyrus MRI volume and smaller left temporal P300 amplitude in first episode schizophrenia. *Arch Gen Psychiatry* 2002;59(4):321-31.
101. Gruber SA, Rogowska J, Holcomb P, Soraci S, Yurgelun-Todd DA. Stroop performance in normal control subjects: an fMRI study. *NeuroImage* 2002;16(2):349-60.
102. Moore CM, Bonello CM, Sherwood AR, Cohen BM, Renshaw PF, Yurgelun-Todd DA. Mesial temporal lobe Cho to Cr(PCr) ratio asymmetry in chronic schizophrenics. *Schizophr Res* 2002;57(1):35-42.
103. Steingard RJ, Renshaw PF, Hennen J, Lenox M, Young AD, Connor DF, Yurgelun-Todd DA. Smaller frontal lobe white matter volumes in depressed adolescents as detected by MRI. *Biol Psychiatry* 2002;52(5):413-7.

104. Yurgelun-Todd DA, Killgore WDS, Young AD. Sex differences in cerebral tissue volume and cognitive performance during adolescence. *Psychological Reports* 2002;91:743-57.
105. Lee CA, Shenton ME, Salisbury DF, Kasai K, Onitsuka T, Dickey CC, Yurgelun-Todd DA, Kikinis R, Jolesz FA, McCarley RW. Fusiform gyrus volume reduction in first-episode schizophrenia: A magnetic resonance study. *Arch Gen Psychiatry* 2002;59(9):775-81.
106. Frumin M, Golland P, Kikinis R, Hirayasu Y, Salisbury DF, Hennen J, Dickey CC, Anderson M, Fischer IA, Yurgelun-Todd DA, Jolesz FA, Grimson WE, McCarley RW, Shenton ME. Shape differences in the corpus callosum in first psychotic episode schizophrenia and first psychotic episode affective disorder. *Am J Psychiatry* 2002 May;159(5):866-8.
107. Yurgelun-Todd DA, Killgore WDS, Cintron CB. Cognitive correlates of medial temporal lobe development during adolescence: an MRI study. *Perceptual and Motor Skills* 2003;96:3-17.
108. Kasai K, Shenton ME, Salisbury DF, Hirayasu Y, Lee CA, Ciszewski AA, Yurgelun-Todd DA, Kikinis R, Jolesz FA, McCarley RW. Progressive decrease of left superior temporal gyrus gray matter volume in first episode schizophrenia. *Am J Psychiatry* 2003;160(1):156-64.
109. Pope HG, Gruber AJ, Hudson JI, Cohane G, Huestis MA, Yurgelun-Todd D. Early-onset cannabis use and cognitive deficits: what is the nature of the association? *Drug Alcohol Depend* 2003;69(3):303-10.
110. Belmonte MK, Yurgelun-Todd DA. Anatomic dissociation of selective and suppressive processes in visual attention. *NeuroImage* 2003;19(1):180-9.
111. Ganis G, Kosslyn SM, Stose S, Thompson WL, Yurgelun-Todd DA. Neural correlates of different types of deception: An fMRI investigation. *Cerebral Cortex* 2003;13:830-6.
112. Killgore WDS, Young AD, Femia LA, Bogorodzki P, Rogowska J, Yurgelun-Todd DA. Cortical and limbic activation during viewing of high versus low-calorie foods. *NeuroImage* 2003;19(4):1381-94.
113. Belmonte MK, Yurgelun-Todd DA. Functional anatomy of impaired selective attention and compensatory processing in autism. *Cog Brain Res* 2003;17(3):651-64.
114. Kasai K, Shenton ME, Salisbury DF, Hirayasu Y, Onitsuka T, Spencer MH, Yurgelun-Todd DA, Kikinis R, Jolesz FA, McCarley RW. Progressive decrease of left Heschl gyrus and planum temporale gray matter volume in first-episode schizophrenia - A longitudinal magnetic resonance imaging study. *Arch Gen Psychiatry* 2003;60(8):766-75.
115. Kasai K, Shenton ME, Salisbury DF, Onitsuka T, Toner SK, Yurgelun-Todd D, Kikinis R, Jolesz FA, McCarley RW. Differences and similarities in insular and temporal pole MRI gray matter volume abnormalities in first-episode schizophrenia and affective psychosis. *Arch Gen Psychiatry* 2003 60(11):1069-77.
116. Gruber AJ, Pope HG, Hudson JI, Yurgelun-Todd DA. Attributes of long-term heavy cannabis users. *Psychol Med* 2003;33:1415-22.

117. Ke Y, Streeter C, Lowen S, Nassar LE, Parow AM, Hennen J, Yurgelun-Todd DA, Sarid-Segal O, Awad LA, Rendall M, Gruber SA, Nason A, Mudrick MJ, Blank SR, Ciraulo DA, Renshaw PF. Increased frontal lobe phosphocreatine levels observed in heavy cocaine users after treatment for cocaine dependence-An 1H MRS T2 relaxometry study. *Spectroscopy* 2003; 17: 231-39.
118. Killgore WDS, Yurgelun-Todd. Activation of the amygdala and anterior cingulate during non-conscious processing of sad versus happy faces. *NeuroImage* 2004;21(4):1215-23.
119. Kurland J, Naeser MA, Baker EH, Doron K, Martin PI, Seekins HE, Bogdan A, Renshaw P, Yurgelun-Todd D. Test-retest reliability of fMRI during nonverbal semantic decisions in moderate-severe nonfluent aphasia patients. *Behav Neurol.* 2004;15(3-4):87-97.
120. Naeser MA, Martin PI, Baker EH, Hodge SM, Sczerzenie SE, Nicholas M, Palumbo CL, Goodglass H, Wingfield A, Samaraweera R, Harris G, Baird A, Renshaw P, Yurgelun-Todd D. Overt prepositional speech in chronic nonfluent aphasia studied with dynamic susceptibility contrast fMRI method. *NeuroImage* 2004;22(1):29-41.
121. Ke Y, Streeter CC, Nassar LE, Sarid-Segal O., Hennen J, Yurgelun-Todd DA, Awad L, Rendall MJ, Gruber SA, Nason A, Mudrick MJ, Blank SR, Meyer AA, Knapp C, Ciraulo DA, Renshaw PF. Frontal lobe GABA levels in cocaine dependence: a two-dimensional, J-resolved magnetic resonance spectroscopy study. *Psychiatry Res* 2004;130(3):283-93.
122. Rogowska J, Gruber SA, Yurgelun-Todd DA. Functional magnetic resonance imaging in schizophrenia: cortical response to motor stimulation. *Psychiatry Res* 2004; 130(3):227-43.
123. Keefe RS, Seidman LJ, Christensen BK, Hamer RM, Sharma T, Sitskoorn MM, Lewine RR, Yurgelun-Todd DA, Gur RC, Tohen M, Tollefson GD, Sanger TM, Lieberman JA. Comparative effect of atypical and conventional antipsychotic drugs on neurocognition in first-episode psychosis: a randomized, double-blind trial of olanzapine versus low doses of haloperidol. *Am J Psychiatry* 2004 June;161(6):985-95.
124. Silveri MM, Tzilos GK, Pimentel PJ, Yurgelun-Todd DA. Trajectories of adolescent emotional and cognitive development: Effects of sex and risk for drug use. *Ann N Acad Sci.* 2004 June; 1021:363-70.
125. Rosso IM, Young A, Femia LA, Yurgelun-Todd DA. Cognitive and emotional components of frontal lobe functioning in childhood and adolescence. *Ann N Acad Sci.* 2004 June;1021:355-62.
126. Gruber SA, Rogowska J, Yurgelun-Todd, DA. Decreased activation of the anterior cingulate in bipolar patients: An fMRI study. *J Affect Disord.* 2004; 82(2):191-201.
127. Kanayama G, Rogowska J, Pope HG, Gruber SA, Yurgelun-Todd DA. Spatial working memory in heavy cannabis users: a functional resonance imaging study. *Psychopharmacology (Berl).* 2004 June 16; 176: 239-247.

128. Frederick BD, Lyoo IK, Satlin A, Ahn KH, Kim MJ, Yurgelun-Todd DA, Cohen BM, Renshaw PF. In vivo proton magnetic resonance spectroscopy of the temporal lobe in Alzheimer's disease. *Prog Neuropsychopharmacol Biol Psychiatry*. 2004;28(8):1313-22.
129. Pillay SS, Rogowska J, Kanayama G, Jon DI, Gruber S, Simpson A, Cherayil M, Pope HG, Yurgelun-Todd DA. Neurophysiology of motor function following cannabis discontinuation in chronic cannabis smokers: an fMRI study. *Drug Alcohol Depend*. 2004;76(3):261-71.
130. Halpern JH, Pope HG J, Sherwood AR, Barry S, Hudson JI, Yurgelun-Todd DA. Residual neuropsychological effects of illicit 3,4-methylenedioxymethamphetamine (MDMA) in individuals with minimal exposure to other drugs. *Drug Alcohol Depend*. 2004 Aug 16; 75(2):135-47.
131. Silveri MM, Pollack MH, Diaz CI, Nassar LE, Mendelson JH, Yurgelun-Todd DA, Renshaw PF, Kaufman MJ. Cerebral phosphorus metabolite and transverse relaxation time abnormalities in heroin-dependent subjects at onset of methadone maintenance treatment. *Psychiatry Res*. 2004 Sep 15; 131(3):217-26.
132. Kasai K, McCarley RW, Salisbury DF, Onitsuka T, Demeo S, Yurgelun-Todd D, Kikinis R, Jolesz FA, Shenton ME. Cavum septi pellucidi in first-episode schizophrenia and first-episode affective psychosis; an MRI study. *Schizophrenia Research*. 2004 Nov 1; 17(1): 65-76.
133. Killgore WDS, Yurgelun-Todd DA. Sex-related developmental differences in the lateralized activation of the prefrontal cortex and amygdala during the perception of facial affect. *Percept Mot Skills*. 2004;99(2):371-91.
134. Yurgelun-Todd DA, Coyle JT, Gruber SA, Renshaw PF, Silveri MM, Amico E, Cohen B, Goff DC. Functional magnetic resonance imaging studies of schizophrenic patients during word production: effects of D-cycloserine. *Psychiatry Res*. 2005;138(1):23-31.
135. Tzilos GK, Cintron CM, Woods J, Simpson NS, Young AD, Pope, HG, Yurgelun-Todd DA. Lack of hippocampal volume change in long-term heavy cannabis users. *Am J Addict*. 2005;14(1):64-72.
136. Martin PI, Naeser MA, Doron KW, Bogdan A, Baker EH, Kurland J, Renshaw P, Yurgelun-Todd D. Overt naming in aphasia studied with a functional MRI hemodynamic delay design. *Neuroimage*. 2005 Oct 15;28(1):194-204.
137. Rosso IM, Cintron CM, Steingard RJ, Renshaw PF, Young AD, Yurgelun-Todd DA. Amygdala and hippocampus volumes in pediatric major depression. *Biol Psychiatry*. 2005;57(1):21-6.
138. Hooley JM, Gruber SA, Scott LA, Hiller JB, Yurgelun-Todd DA. Dorsolateral Prefrontal Cortex in Response to Maternal Criticism and Praise in Recovered Depressed and Healthy control participants. *Biol Psychiatry*. 2005;57(7):809-12.
139. Bogorodzki P, Rogowska J, Yurgelun-Todd DA. Structural group classification technique based on regional fMRI BOLD responses. *IEE Trans Med Imaging*. 2005;24(3):389-98.

140. Killgore WD, Yurgelun-Todd DA. Body mass predicts orbitofrontal activity during visual presentations of high-calorie foods. *Neuroreport*. 2005;16(8):859-63.
141. Gruber SA, Yurgelun-Todd DA. Neuroimaging of marijuana smokers during inhibitory processing: A pilot investigation. *Brain Res Cog Brain Res*. 2005;23(1):107-18.
142. Halpern JH, Sherwood AR, Hudson JI, Yurgelun-Todd DA, Pope HG. Psychological and cognitive effects of long-term peyote use among Native Americans. *Biol Psychiatry*. 2005;58(8):624-31.
143. Killgore WD, Yurgelun-Todd DA. Social anxiety predicts amygdala activation in adolescents viewing fearful faces. *Neuroreport*. 2005;16(15):1671-5.
144. Killgore WD, Yurgelun-Todd DA. Developmental changes in the functional brain responses of adolescents to images of high and low-calorie foods. *Dev Psychobiol*. 2005;47(4):377-97.
145. Killgore WD, Yurgelun-Todd DA. Ventromedial prefrontal activity correlates with depressed mood in adolescent children. *Neuroreport*. 2006;17(2):167-71.
146. Lyoo IK, Pollack MH, Silveri MM, Ahn KH, Diaz CI, Hwang J, Kim SJ, Yurgelun-Todd DA, Kaufman MJ, Renshaw PF. Prefrontal and temporal gray matter density decreases in opiate dependence. *Psychopharmacology (Berl)*. 2006;184(2):139-44.
147. Bonelli RM, Kapfhammer HP, Pillay SS, Yurgelun-Todd DA. Basal ganglia volumetric studies in affective disorder: what did we learn in the last 15 years? *J Neural Transm*. 2006;113(2):255-68.
148. Joffe H, Hall JE, Gruber SA, Sarmiento IA, Cohen LS, Yurgelun-Todd DA, Martin KA. Estrogen therapy selectively enhances prefrontal cognitive processes: a randomized, double-blind, placebo-controlled study with functional magnetic resonance imaging in perimenopausal and recently postmenopausal women. *Menopause*. 2006;13(3):411-422.
149. Killgore WD, Yurgelun-Todd DA. Affect modulates appetite-related brain activity to images of food. *Int J Eat Disord*. 2006;39(5):357-63.
150. Pillay SS, Gruber SA, Rogowska J, Simpson N, Yurgelun-Todd DA. fMRI of fearful facial affect recognition in panic disorder: the cingulated gyrus-amygdala connection. *J Affect Disord*. 2006;94(1-3):173-81.
151. Gruber SA, Tzilos GK, Silveri MM, Pollack M, Renshaw PF, Kaufman MJ, Yurgelun-Todd DA. Methadone maintenance improves cognitive performance after two months of treatment. *Exp Clin Psychopharmacol*. 2006 May;14(2):157-64.
152. Kuroki N, Shenton ME, Salisbury DF, Hirayasu Y, Onitsuka T, Ersner-Hershfield H, Yurgelun-Todd D, Kikinis R, Jolesz FA, McCarley RW. Middle and inferior temporal gyrus gray matter volume abnormalities in first-episode schizophrenia: an MRI study. *Am J Psychiatry*. 2006 Dec;163(12):2103-10.

153. Silveri MM, Rohan ML, Pimentel PJ, Gruber SA, Rosso IM, Yurgelun-Todd DA. Sex differences in the relationship between frontal white matter microstructure and impulsivity in adolescents. *Magn Reson Imaging*. 2006 Sep;24(7):833-41.
154. Yurgelun-Todd DA, Killgore WD. Fear-related activity in the prefrontal cortex increases with age during adolescence: a preliminary fMRI study. *Neurosci Lett*. 2006 Oct 9;406(3):194-9.
155. Gruber SA, Yurgelun-Todd DA. Neurobiology and the law: A role in juvenile justice? *Ohio State J Criminal Law*. 2006; 3(2):321-340.
156. Sneider JT, Pope HG Jr, Silveri MM, Simpson NS, Gruber SA, Yurgelun-Todd DA. Altered regional blood volume in chronic cannabis smokers. *Exp Clin Psychopharmacol*. 2006 Nov;14(4):422-8.
157. Yurgelun-Todd DA, Sneider JT. Neurocognitive deficits in bipolar disorder. *Clin Approach Bipolar Disord*. 2006; 5: 51-59.
158. Pillay SS, Rogowska J, Gruber SA, Simpson N, Yurgelun-Todd DA. Recognition of happy facial affect in panic disorder: an fMRI study. *J Anxiety Disord*. 2007;21(3):381-93.
159. Rosso IM, Killgore WD, Cintron CM, Gruber SA, Tohen M, Yurgelun-Todd DA. Reduced amygdala volumes in first-episode bipolar disorder and correlation with cerebral white matter. *Biol Psychiatry*. 2007 Mar 15;61(6):743-9.
160. Killgore WD, Gruber SA, Yurgelun-Todd DA. Depressed mood and lateralized prefrontal activity during a Stroop task in adolescent children. *Neurosci Lett*. 2007 Apr 6;416(1):43-8.
161. Yurgelun-Todd D. Emotional and cognitive changes during adolescence. *Curr Opin Neurobiol*. 2007 Apr;17(2):251-7.
162. Killgore WD, Yurgelun-Todd DA. Positive affect modulates activity in the visual cortex to images of high calorie foods. *Int J Neurosci*. 2007 May;117(5):643-53.
163. Salvatore P, Khalsa HM, Hennen J, Tohen M, Yurgelun-Todd D, Casolari F, Depanfilis C, Maggini C, Baldessarini RJ. Psychopathology factors in first-episode affective and non-affective psychotic disorders. *J Psychiatr Res*. 2007 Nov;41(9):724-736.
164. Killgore WD, Yurgelun-Todd DA. Neural correlates of emotional intelligence in adolescent children. *Cog Affect Behav Neurosci*. 2007; 7(2): 140-151.
165. Heaton KJ, Palumbo CL, Proctor SP, Killiany RJ, Yurgelun-Todd DA, White RF. Quantitative magnetic resonance brain imaging in US army veterans of the 1991 Gulf War potentially exposed to sarin and cyclosarin. *Neurotoxicol*. 2007 Jul;28(4):761-769.
166. Yurgelun-Todd DA, Silveri MM, Gruber SA, Rohan ML, Pimentel PJ. White matter abnormalities observed in bipolar disorder: A diffusion tensor imaging study. *Bipolar Disord*. 2007; 9(5): 504-12.

167. Killgore WDS, Yurgelun-Todd DA. The right-hemisphere and valence hypotheses: Could they both be right (and sometimes left)? *Soc Cog Affect Neurosci.* 2007; 2(3): 240-250.
168. Sim ME, Lyoo IK, Streeter CC, Covell J, Sarid-Segal O, Ciraulo DA, Kim MJ, Kaufman MJ, Yurgelun-Todd DA, Renshaw PF. Cerebellar gray matter volume correlates with duration of cocaine use in cocaine-dependent subjects. *Neuropsychopharmacology.* 2007; 32(10): 2229-37.
169. Killgore WDS, Yurgelun-Todd DA. Unconscious processing of facial affect in children and adolescents. *Soc Neurosci.* 2007; 2(1): 28-47.
170. Streeter CC, Terhune DB, Gruber S, Sarid-Segal O, Silveri MM, Tzilos G, Afshar M, Tian H, Renshaw PF, Ciraulo DA, Yurgelun-Todd DA. Performance on the Stroop predicts treatment compliance in cocaine dependent individuals. *Neuropsychopharmacology.* 2008; 33(4): 827-36.
171. Yurgelun-Todd D, Sava S, Dahlgren MK. Mood disorders. *Neuroimaging Clinics of North America.* 2007; 17(4): 511-521.
172. Gruber SA, Rosso IM, Yurgelun-Todd D. Neuropsychological performance predicts clinical recovery in bipolar patients. *J Affect Disord.* 2008; 105(1-3).
173. Pillay SS, Rogowska J, Gruber SA, Simpson N, Yurgelun-Todd, DA. Cannabis and motor function: fMRI changes following 28 days of discontinuation. *Exp Clin Psychopharmacol.* 2008; 16(1): 22-32.
174. Yurgelun-Todd DA, Rogowska J, Gruber SA, Bogorodzki P, Simpson NS, Irvin RW, Jauregui KA, Strong RA, Rusche JR. Increased amygdala fMRI activation after secretin administration. *Exp Clin Psychopharmacol.* 2008 Jun;16(3):191-8.
175. Sneider JT, Pope HG, Silveri MM, Simpson NS, Gruber SA, Yurgelun-Todd DA. Differences in regional blood volume during a 28-day period of abstinence in chronic cannabis smokers. *Eur Neuropsychopharmacol.* 2008 Aug;18(8):612-9.
176. Silveri MM, Tzilos GK, Yurgelun-Todd DA. Relationship between white matter volume and cognitive performance during adolescence: effects of age, sex, and risk for drug use. *Addiction.* 2008 Sep;103(9):1509-20.
177. Silveri MM, Dikan J, Ross AJ, Jensen JE, Kamiya T, Kawada Y, Renshaw PF, Yurgelun-Todd DA. Citicoline enhances frontal lobe bioenergetics as measured by phosphorus magnetic resonance spectroscopy. *NMR Biomed.* 2008 Dec; 21(10):1066-75.
178. Chen Y, Grossman ED, Bidwell LC, Yurgelun-Todd DA, Gruber SA, Levy DL, Nakayama K, Holzman PS. Differential activation patterns of occipital and prefrontal cortices during motion processing: evidence from normal and schizophrenic brains. *Cogn Affect Behav Neurosci.* 2008; 8(3): 293-303.
179. Killgore WD, Gruber SA, Yugelun-Todd DA. Abnormal corticostriatal activity during fear perception in bipolar disorder. *Neuroreport.* 2008 Oct;19(15):1523-7.

180. Sava S, Yurgelun-Todd DA. Functional magnetic resonance in psychiatry. *Topics in Magn Reson Imaging*. 2008;19(2):71-79.
181. Hooley JM, Gruber SA, Parker HA, Guillaumot J, Rogowska J, Yurgelun-Todd DA. Cortico-limbic response to personally challenging emotional stimuli after recovery from depression. *Psychiatr Res Neuroimaging* 2009; 171(2): 106-19.
182. Killgore WD, Rosso IM, Gruber SA, Yurgelun-Todd DA. Amygdala volume and verbal memory performance in schizophrenia and bipolar disorder. *Cognitive and Behavioral Neurology*. 2009; 22, 28-37.
183. Killgore WDS, Ross AJ, Kamiya T, Kawada Y, Renshaw PF, Yurgelun-Todd DA. Citicoline affects appetite and cortico-limbic responses to images of high calorie foods. *Int. J of Eating Disorders*. 2009; 73(4): 587-590.
184. Haws C, Gray DD, Yurgelun-Todd DA, Moskos M, Meyer LJ, Renshaw PF, The possible effect of altitude on regional variation in suicide rates. *Med. Hypotheses*. 2009; 73(4): 587-590.
185. Gruber SA, Rogowska J, Yurgelun-Todd DA. Altered affective response in marijuana smokers: and fMRI study. *Drug and Alcohol Dependence*. 2009, in press.
186. Killgore, WDS, Yurgelun-Todd DA. Cerebral correlates of amygdala responses during non-conscious perception of facial affect in adolescent and pre-adolescent children. *Cognitive Neuroscience*. 2009, in press.
187. Hooley JM, Gruber SA, Parker HA, Guillaumot J, Rogowska J, Yurgelun-Todd DA. Neural Processing of Emotional Overinvolvement in Borderline Personality Disorder, *The Journal of Clinical Psychiatry*, 2009, in press

Proceedings of Meetings:

1. Yurgelun-Todd DA, Gruber SA, Cohen BM, Renshaw PF. 1H spectroscopy of the temporal lobes in schizophrenic and bipolar patients. In: Macher JP, Crocq MA, Nedelec JF, editors. *New Prospects in Psychiatry: The Bioclinical Interface*. Paris: John Libbey Eurotext; 1995. p. 481-486.
2. Yurgelun-Todd DA, Renshaw PF, Gruber SA, Cohen BM. Echo planar MRI of schizophrenics and normal controls during word production. In: Macher JP, Crocq MA, Nedelec JF, editors. *New Prospects in Psychiatry: The Bioclinical Interface*. Paris: John Libbey Eurotext; 1995. p. 487-90.

Reviews, Chapters, and Editorials:

1. Pope HG, Hudson JI, Jonas JM, Yurgelun-Todd DA. Antidepressant treatment of bulimia: A research update. In: Kaye W, Gwitsman H, editors. *Physiology and Treatment of Bulimia in Normal Weight Women*. Washington DC: Am Psychiatric Assoc; 1985. p. 119-31.

2. Pope HG, Hudson JI, Jonas JM, Yurgelun-Todd DA. Antidepressant treatment of bulimia: A two-year follow-up study. In: Hollister LE, Lasagna L, editors. *The Year Book of Drug Therapy Annual*. Chicago: Year Book Medical Publishers; 1987. p. 420.
3. Cohen BM, Renshaw PF, Yurgelun-Todd DA. Imaging the mind: Magnetic resonance spectroscopy and functional brain imaging [Invited Editorial]. *Am J Psychiatry* 1995;152(5):655-8.
4. Renshaw PF, Yurgelun-Todd DA, Cohen BM. Perils and pitfalls of fMRI: Photostimulation in subjects with schizophrenia. In: Macher JP, Crocq MA, Nedelec JF, editors. *New Prospects in Psychiatry: The Bioclinical Interface*. Paris: John Libbey Eurotext; 1995. p. 415-19.
5. Yurgelun-Todd DA, Kinney DK, Sherwood AR, Renshaw PF. Magnetic resonance studies of schizophrenia [Review]. *Semin Clin Neuropsychiat* 1996;1(1):4-19.
6. Miallet JP, Pope HG, Yurgelun-Todd DA. Impaired attention in depressive states: a non-specific deficit? [Review]. *Psychol Med* 1996;26(5):1009-20.
7. Yurgelun-Todd DA, Renshaw PF. Applications of functional MR imaging to research in psychiatry. In: Heiserman JE, Drayer BP, editors. *Neuroimaging Clinics of North America*. Philadelphia: W.B. Saunders; 1999. p. 295-308.
8. Gruber SA, Yurgelun-Todd DA. Neuropsychological Correlates of Substance Abuse. In: Kaufman MJ, editors. *Brain Imaging in Substance Abuse: Research, Clinical and Forensic Applications*. New York: Elsevier Science; 1999. p. 199-230.
9. Quattrocki E, Baird AA, Yurgelun-Todd DA. Biological aspects of the link between smoking and depression [Review]. *Harv Rev Psychiatry* 2000;8(3):99-110.
10. Yurgelun-Todd DA, Renshaw PF. Magnetic resonance spectroscopy in childhood psychiatric disorders. In: Ernst M, Rumsey JM, editors. *Functional Neuroimaging in Child Psychiatry*. Cambridge: Cambridge University Press; 2000. p. 59-77.
11. Pope HG, Gruber AJ, Hudson JI, Huestis MA, Yurgelun-Todd D. Cognitive measures in long-term cannabis users [Review]. *J Clin Pharmacol* 2002;42(11 Suppl):41-47.
12. Yurgelun-Todd DA, Gruber SA. Magnetic resonance methods for the study of psychopathology. In: Maher BA, Lenzenweger MF, Hooley JM, editors. *Principles of Experimental Psychopathology*. Washington DC: American Psychological Association; 2002. p. 211-228.
13. Pope HG, Yurgelun-Todd DA. Cannabis and Cognition. In: Castle D, Murray R, editors. *Marijuana and Madness*. Cambridge: Cambridge University Press; 2004.
14. Yurgelun-Todd DA. Abnormal Brain Functions in Psychosis: Lessons from Functional Imaging. *Neuroradiology Education and Research Foundation Symposium 2004: Integration of Imaging Strategies in Neuroradiology*.
15. Nordenson B, Gruber SA, Yurgelun-Todd DA. Neurocognition in bipolar disorder: A review of the current research [Review]. *Current Psychosis and Therapeutic Reports* 2004, Vol. 2.

16. Yurgelun-Todd, DA, Ross AJ. Functional magnetic resonance imaging studies in bipolar disorder [Review]. *CNS Spectr.* 2006 Apr; 11 (4): 287-97.
17. Gruber SA, Silveri MM, Yurgelun-Todd DA. Neuropsychological consequences of opiate use [Review]. *Neuropsychol Rev.* 2007 Sep; 17(3):299-315. Review.
18. Silveri MM, Yurgelun-Todd DA. Developmental neuropsychology: normative trajectories and risk for psychiatric illness. *Neuropsychological Models and Methods relevant to Mental Illness.* 2008; Cambridge: Cambridge University Press, in press
19. Silveri MM, Yurgelun-Todd DA, Renshaw PF. Magnetic resonance spectroscopy: methods and applications in developmental clinical neuroscience. *Functional neuroimaging in child psychiatry.* 2008; Cambridge: Cambridge University Press. p. 59-76.
20. Sava S, McCafrey AM, Yurgelun-Todd DA. Cognitive Neuroscience. *Women and Addiction.* 2008; Sudie Black, Guilford Publications. p. 133-146.

Letters to the Editor

1. Halpern JH, Pope HG J, Sherwood AR, Barry S, Hudson JI, Yurgelun-Todd DA. Reply to Lyvers and Hasking (2004) [Letter to editor]. *Drug Alcohol Depend.* 2004; June 16: 75(2):153.
2. Yurgelun-Todd DA, Kinney DK. Perinatal complications and Wisconsin Card Sort performance: A reply [Letter to editor]. *Neuropsychiat Neuropsychol Behav Neurol* 1994;7(1):74-5.

Abstracts

1. Pope HG, Yurgelun-Todd DA. Cognitive toxicity of cannabis: The devil is in the confounding variables. [Oral Presentation]. American Psychiatric Association 2004.
2. Hooley J, Gruber SA, Yurgelun-Todd DA. Emotional processing of psychosocial stimuli in BPD. [Oral Presentation]. American Psychiatric Association 2004.
3. Yurgelun-Todd DA, Tohen MF, Risser R, Wei H, Gruber SA. Improved cognitive outcome with olanzapine treatment in bipolar patients [Abstract]. American Psychiatric Association 2004.
4. Yurgelun-Todd DA, Rusche J, Juaregui K, Rioux P, Rogowska J, Gruber SA. Increased brain activity after secretin administration: An fMRI study [Abstract]. American Psychiatric Association 2004.
5. Rosso IM, Cintron CM, Young AD, Yurgelun-Todd DA. Bilateral reductions of amygdala volume in bipolar disorder [Abstract]. *Biol Psychiatry* 2004;55(8 Suppl 1):178.
6. Gruber SA, Rusche J, Juaregui K, Rioux P, Rogowska J, Yurgelun-Todd DA. Increased brain activity after secretin administration: An fMRI study [Abstract]. *Biol Psychiatry* 2004;55(8 Suppl 1):119.

7. Pillay SS, Gruber SA, Rogowska J, Simpson N, Yurgelun-Todd DA. Frontal systems implicated in dysregulation of attention in panic disorder: An fMRI Study [Abstract]. *Biol Psychiatry* 2004;55(8 Suppl 1):1.
8. Pillay SS, Gruber SA, Rogowska J, Yurgelun-Todd, DA. fMRI of Attentional Regulation in Panic Disorder [Abstract]. Organization for Human Brain Mapping 2004.
9. Irvin RW, Pillay SS, Yurgelun-Todd DA. Clinical correlates of aggression in first episode psychosis [Abstract]. *Biol Psychiatry* 2004;55(8 Suppl 1):38.
10. Silveri MM, Young AA, Yurgelun-Todd DA. Emotional intelligence and anxiety in adolescents at risk for alcohol abuse [Abstract]. Research Society on Alcoholism 2004.
11. Olson D, Coyle J, Ke K, Gruber S, Rosso I, Silveri M, Renshaw P, Yurgelun-Todd D. Two-dimensional J-resolved magnetic resonance spectroscopy (2D J-MRS) in schizophrenia [Oral Presentation]. International Congress on Schizophrenia Research 2005.
12. Rogowska J, Bogorodzki P, Rohan M, Renshaw P, Yurgelun-Todd D. Experimental phantom system for MR perfusion measurements on the 3T MR scanner [Abstract]. Organization for Human Brain Mapping 2005.
13. Carey P, de Wit R, Seedat S, Stein D, Silveri M, Yurgelun-Todd D. Functional magnetic resonance imaging (fMRI) of cannabis and cannabis/methaqualone abusers, their discordant siblings and normal controls [Abstract]. College on Problems of Drug Dependence 2005.
14. Silveri MM, Rogowska J, Young AD, Yurgelun-Todd DA. Adolescents at risk for substance abuse demonstrate reduced amygdalar and hippocampal activation during perception of fearful affect: an fMRI investigation [Abstract]. Research Society on Alcoholism 2005.
15. Silveri MM, Rogowska J, Young AD, Gruber SA, Yurgelun-Todd DA. Frontal activation during Stroop performance in adolescents at risk for substance abuse: An fMRI investigation [Abstract]. Society for Neuroscience 2005.
16. Gruber SA, Rogowska J, Sneider JT, Yurgelun-Todd, DA. Affective responsivity in chronic marijuana smokers: An fMRI study. [Abstract]. Society of Biological Psychiatry 2006.
17. Olson DP, Ross, A, Strakowski SM, Gruber SA, Jensen E, Eliassen JC, Chu WJ, Lee JH, Adler CM, Bain EE, Kujawa M, Gharabawi G, Renshaw PF, Yurgelun-Todd, DA. Altered metabolite concentrations in the brains of frequently relapsing bipolar patients treated with long-acting injectable (LAI) Risperidone. [Abstract]. Society of Biological Psychiatry 2006.
18. Sneider JT, Pope HG, Silveri MM, Gruber SA, Rogowska J, Yurgelun-Todd DA. Changes in regional blood volume during a 28-day period of abstinence in chronic cannabis smokers [Abstract]. College on Problems of Drug Dependence 2006.
19. Silveri MM, Sneider JT, Yurgelun-Todd DA. Salivary cortisol levels following magnetic resonance imaging and neuropsychological assessment in adolescents at risk for substance abuse [Abstract]. Research Society on Alcoholism 2006.

20. Rogowska J, Bogorodzki P, Yurgelun-Todd D. Network analysis of cortico-limbic regions in bipolar disorder during fMRI fearful facial affect [Abstract]. Organization for Human Brain Mapping 2006.
21. Rogowska J, Bogorodzki P, Yurgelun-Todd D. A new method of diagnostic classification based on differences in regional fMRI activation patterns [Abstract]. European Society for Magnetic Resonance in Medicine and Biology 2006.
22. Rosso IM, Silveri MM, Gruber SA, Yurgelun-Todd DA. Prefrontal-limbic brain maturation and risk for psychopathology in adolescence. Adolescent Brain Development: Implications or Psychiatric Treatment Symposium [Oral Presentation]. American Psychiatric Association 2006.
23. Ross AJ, Rogowska J, Yurgelun-Todd DA. Brain activation in the supramarginal and fusiform gyri in response to fearful faces in bipolar disorder [Abstract]. Society for Research in Psychopathology 2006.
24. Yurgelun-Todd DA, Olson DP, Jensen JE, Ross A, Gruber SA, Silveri MM, Renshaw PF, Eliassen JC, Chu W, Lee J, Adler CM, Kujawa M, Gharabawi G, Strakowski SM. Changes in brain metabolites in frequently relapsing bipolar patients after treatment with long-acting risperidone [Abstract]. American College of Neuropsychopharmacology 2006.
25. Pillay SS, Rogowska J, Murray D, Orr S, Yurgelun-Todd DA. Skin conductance responses to electric shock extinction during cannabis discontinuation: A conditioning study [Abstract]. American College of Neuropsychopharmacology 2006.
26. Gruber SA, Rogowska J, Sneider J, Yurgelun-Todd D. Alterations in affective response to masked faces in chronic marijuana smokers: an fMRI study [Abstract]. American College of Neuropsychopharmacology 2006.
27. Gruber SA, Rogowska J, Sneider JT, Yurgelun-Todd DA. fMRI of Affective Responsivity in Marijuana Smokers: Implications for Schizophrenia [Abstract]. International Congress on Schizophrenia Research 2007.
28. Silveri MM, Jensen JE, Sneider JT, Gruber SA, Yurgelun-Todd DA. Relationship between proton metabolite ratios and duration of cannabis use: Implications for schizophrenia [Abstract]. International Congress on Schizophrenia Research 2007.
29. Gruber SA, Rogowska J, Sneider JT, Yurgelun-Todd DA. Altered affective responsivity in chronic marijuana smokers: An fMRI study [Oral Presentation]. College on Problems of Drug Dependence 2007.
30. Silveri MM, Rogowska J, Wightman B, Renshaw PF, Yurgelun-Todd DA. Amygdalar activation, craving and preference for alcohol-related stimuli in social drinkers: A BOLD fMRI investigation. Research Society on Alcoholism 2007.
31. Silveri MM, Dikan J, Ross AJ, Jensen JE, Kamiya T, Kawada Y, Renshaw PF, Yurgelun-Todd DA. Oral citicoline supplementation significantly alters phosphorus metabolites in the anterior cingulate cortex. Society for Neuroscience 2007.

32. Rogowska J, Gruber, S, Yurgelun-Todd, DA. Masked facial affect processing in bipolar disorder: an fMRI study. Society for Neuroscience 2007.